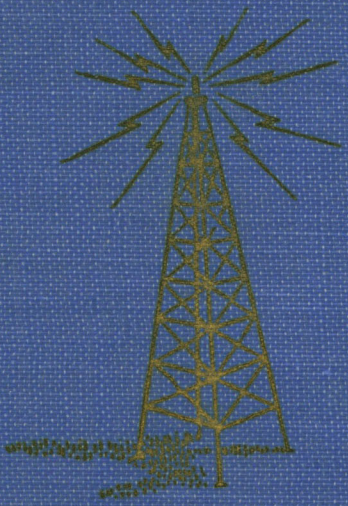
BILL BROWN LISTENS IN



WAYNE WHIPPLE
AND
S. F. AARON

1923.

To Wilford from

Wm Murdock. with best
wishes for a Merry Christmas

Gus had drawn a big sun with radiating rays
and a grinning face

BILL BROWN LISTENS IN

BY

WAYNE WHIPPLE

Author of "Bill Brown's Radio," "The Story-Life of Lincoln" Series, "The Story of Young George Washington," and other "Young Patriot Stories," "The Heart of Lee," "The Story of the Flag," etc., etc.

AND

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FOREWORD

In this second volume of the Bill Brown Radio stories we have introduced a typical young Italian, student at the school of Technology, who brings "Bill" and "Gus" into closer touch with the life and stirring example of his famous countryman: Marconi. May the story of the young Marconi and his later remarkable achievements awaken in young radio enthusiasts the sentiment expressed by our great American inventor:

I have great admiration and high regard for Marconi the pioneer inventor of Wireless Telegraphic Communication

Thos A Edison

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BILL BROWN LISTENS IN

CHAPTER I

STUDENTS

"THEY'VE got a splendid broadcasting station at the Tech, Bill."

"I know it; hence my general exuberance. And if we don't get at it once in a while, it'll be because we can't break in."

"What do you want to shout into it first off?"

"Why, I thought you knew, Gus. I've got it all fixed, date and time, for Professor Gray and Mr. Hooper to listen in. They're the chaps that are responsible for our getting into the Tech and they deserve our first message. I'll explain to President Field and I know he won't object."

"What's this you were telling me about haz-

ing?" asked Gus, but as though really little interested.

"Terry Watkins was telling me; his cousin went there. Lost a new hat the third day, a pair of glasses the fourth and most of his clothes the fifth. His dad has a lot of dough, so he needn't have minded, but that won't be the case with us. I guess it's me for carrying a gun."

"If they're mean enough to pick on you, old scout, I'll carry one, too, but I think you'll be exempt. If I'm to be a victim, I reckon I'll have to grin and take——"

"No; you won't, either. We've come here to study—not to fool—and we haven't got money to spend on ruined duds just to gratify a lot of chumps. There are betters things, too, than a gun; not so crude and not illegal."

"I can imagine," laughed Gus, and turned again to watch the fleeting landscape.

The chums journeyed in silence then, their minds busy conjecturing what their experiences

and adventures were to be, after they became students of the Marshallton Technical School, which they were rapidly approaching and from which they held high hopes of gaining much knowledge. The institution, despite its modest name, was nothing less than a university of broad constructive teaching, with departments of engineering, electricity, chemistry, manual training and biology.

It was within the first two of these departments that William Brown and Augustus Grier were to concentrate their mental efforts. They had, as already related, earned this long-hoped-for opportunity to gain technical knowledge and training by showing what they could do along these lines. They had installed a small water-power plant and an electric lighting system for the Hooper estate, and had also won greater credit for constructing high-class radio receivers through which they had heard a no less personage than Thomas A. Edison speak. The boys had been saving their earnings

to meet tech school expenses for at least a year. Their high school records, good common sense and scientific inclinations had been such as to receive the plaudits of their teacher, Professor Gray, and the members of their class.

Intense application and mental force characterized William Brown, who was called "Billy" by the high school girls—fine, bright-minded young women—and "Bill" by the boys. He was just Bill to nearly everyone. His friends referred to him as the school genius; and such he had proved to be on more than one occasion. Though compelled by a twisted leg to use a crutch and to abstain from strenuous physical participation in sports, he was a favorite. All saw his worth, and Professor Gray said of him that he possessed the mind of a philosopher and the expressiveness of a poet.

Cheerful, delighting in the strength of others, Bill's natural love of friendly contests and admiration for physical prowess impelled him to

adopt as his best chum Gus Grier, who had much in common with him concerning mechanical matters. Gus was in many things almost the exact counterpart of the lame boy.

Gus was bright, shrewd, practical, reticent. He had the sort of mentality that made him a good follower, with enough native wit to discover his own limitations and to acknowledge Bill's superior characteristics. Both displayed that loyalty of friendship whose rare quality has made notable history. Sometimes their classmates called the boys David and Jonathan, or Damon and Pythias; sometimes, the head and body, the former referring to Bill and the latter, with no less admiration, to Gus because of his splendid athletic ability. The muscles of Gus were quite as remarkable in their way as Bill's brains; and both boys were modest, aiding one another in every time of need, doubling all their efforts with the term "we," which Bill used oftenest.

If Bill mastered a mental problem it was: "We

did it by this method." If Gus entered upon a trial of strength or physical skill it was: "We'll do our best," and then: "Well, we won, but it was no cinch"—in deference to the efforts of a beaten opponent. All this was a matter of course. And now, regarding the present, either friend might have said, "We've passed our exams and we're going to Tech."

"Guilford! Guilford! All out for Marshallton!" shouted the brakeman, and in half a minute the boys were climbing into a taxi bound for the school; in half an hour they were facing the great buildings which stood for so much learning, and in half a day they had matriculated and were of the student body.

CHAPTER II

FOOLED

"Come here quick and watch this!"

"What's going on? I've got this letter——"

"This is some livelier than letter writing, Bill," Gus declared, and a moment later Bill was of the same mind.

The boys gazed out of the window of their room in the school dormitory to witness an upper-class reception of one of the freshmen, a lad of almost tender years, yet husky and of undoubted good nature. He was expensively dressed to begin with, a little foppish in appearance even, and it was known that his people were very wealthy. Such as he, then, could well afford the sacrifice demanded of him to become a member in high standing of the Marshallton student body. Whatever was done, short of actual physical injury,

must contribute to the violently initiated youth's general glorification, at least this was the popular impression. It occurred to but few to make serious objections to that which was customary in the school.

Hazing, long since taboo or forbidden in many educational institutions, was still a part of Marshallton Tech, by reason of the belief that a high mentality and virile spirit demanded the extreme mental and physical show-down which hazing is wrongly supposed to bring out. Though severe enough, perhaps the initiations were not so terrible as to call for much complaint.

"By cracky, that's rotten!" exclaimed Gus, as he watched the progress of the affair.

"Worse than mean!" agreed Bill.

This comment was called forth as the victim, in his efforts to escape from his tormentors, had his coat and vest torn from him. In a little time his shirt was reduced to ribbons. A fine gold watch and its broken chain lay on the ground among the

feet of the struggling boys, and an unsuspecting heel soon reduced the time-piece to little more value than the metal in the case. A wallet slid out of a pocket and disgorged from its folds considerable cash and paper, some of which the bystanders gathered up with much difficulty. The freshman's panama, kicked about in the dust, was not rescued until it resembled an uprooted weed.

"We wouldn't enjoy being treated that way," commented Gus, the sentimental.

"We couldn't afford it," amended Bill, the practical. "That sort of thing may be well enough for rich fellows, though I think it's rank foolishness at any time. But, Gus, we've got to dodge it in some way."

Gus made no reply. He was thinking that his chum was right, but, still interested in the excitement without, he left the usual whatever-it-must-be with Bill. When Bill spoke again, some few minutes after the well-hazed youth had made a get-away, Gus listened with interest.

"We can get the materials," Bill finished, "and it won't take long to do the work."

And it did not. Having procured a permit from the professor of physics—and no one could have refused Bill with his convincing tongue—the boys returned well loaded to their room. They took from a paper packing box, whose contents had been hidden from the curious, a lot of wire, some switches, some acid and a number of storage battery cells.

On their way from the central building the chums had been stopped by a number of upper classmen. It was mid-afternoon, an optional study or playtime, and just the hour for brewing mischief. This is what happened.

"Come on there, Freeporters! Put down those boxes; we have a little business to transact with you," the spokesman called.

Gus gazed calmly at the five militant youths in front of him. Without undue egotism, he possessed an easy confidence, and he knew that, bar-

ring some bumps and scratches, that bunch would need assistance in hazing him. He would have complied forthwith, had not Bill given an ultimatum. With a small box under his left arm, he shifted his crutch to his left fingers and slipped the free hand into his pocket, drawing forth about the wickedest-looking pistol that any thug would use. The five began backing away, the spokesman turning quite pale and the others, no doubt, feeling much as he looked.

"Would you Indians want to haze me?" Bill asked.

"Aw, no. You're exempt, of course. We don't bother with cripples, kids, old ladies nor natural criminals." This attempt to be witty trailed off weakly.

"Well, my friend here is carrying glass and we can't tarry now. Any interference with him will result in my turning criminal instanter, and I'm keen to do so. Go on, Gus."

Gus went on, and Bill, with weapon still in hand,

followed after. He turned to call back to the flabbergasted five:

"You can find us in our room any time after to-day. Getting hazed is really great sport, and we won't pull any guns on you then!"

Hardly half an hour elapsed before there came a knock at the door of the room occupied by Bill and Gus. A moment before, Gus had been down to get a pair of pliers that had dropped out of the window and two wide-eyed lads in the hallway had hailed him:

"That crutch-thumper that rooms with you is in for the G. B.," one had said and the other had added:

"Say, he must be a blamed fool to carry a gun and pull it here. 'Prex' won't stand for that."

Bill called a "Come in" in answer to the knock, and no less than President Field and Professor Whitcomb, both looking very stern, entered.

"Brown and Grier, I have heard with real pain and very great surprise, after the letter from

Professor Gray highly recommending you two lads, that you have so soon shown utter disregard for the rules, the standing, the decency of our institution by carrying and drawing a deadly weapon, a pistol, and on slight provocation. This is deserving of instant expul——"

"Sure is, Doctor Field, if it were so. But it isn't. And please, also, do not hold the idea that it was on slight provocation. They were going to haze us, or rather Gus here, Doctor. We had just seen something of this sort, with the result that Fleming, of Chicago, had a ruined suit and panama, a fine watch destroyed, and a lot of money and papers probably lost. We came here to study; our means are limited; if we met with such a disaster our finances wouldn't stand it and we'd have to go home; that's all there is to it. Now, I can't offer you a cigar, Doctor, because you don't and I don't smoke, but if I did I'd probably carry them in this case."

With that Bill drew forth the nickeled pistol

again, snapped it open and disclosed a rather unique cigar case which he extended toward the men.

"Oh, you mean that this thing was——"

"Just that, Doctor. I hope we have respect for the institution to which we have come for a much needed and wanted education. But I saw no harm in fooling those chaps who think they have the right to compel us to lose a lot of time and money. Am I right?"

President Field was human; he tilted back his head and laughed most heartily, nudging the professor also, in quite a boyish way.

"We are greatly relieved, and I wish you had scared those young rascals more than you did. Professor, we shall simply have to put a stop to this hazing—stop it under pain of dismissal. And this joke, now—it should be mentioned at chapel, eh? I really want to thank you, young gentlemen, for doing the school a distinct favor."

"We hope to add to the joke somewhat by to-

morrow, if you will kindly hold up that hazing ban for one day."

"And how is that, may I ask?"

"Would you mind if we keep it a small secret until then? We can promise to refrain from anything dreadful."

"But then we——"

"Please, Doctor. This, if you will trust us, will do more real good than anything the faculty can do in the way of *verboten.* Just twenty-four hours, Doctor."

"Well, well, we shall see. From what Gray wrote, I think we may trust you. Good evening, boys."

CHAPTER III

HAZED?

At the long supper table in the spacious basement of the dormitory, many curious glances were aimed at Bill and Gus, and many a terse remark was shot at them respecting their departure from the honorable ways and the rules of the school. Most pronounced were the expressions of wonder over the fact that the carrier of concealed weapons had not been expelled, or suspended at once. Finally a sophomore whose influence seemed to count most gave voice to the prevailing sentiment:

"Well, I must say if that gun had been pulled on me, I'd have made the cad use it."

"I'll bet you would, too, Siebold!" declared an admirer.

Bill got on his feet and there was an instant

hush. There was something to expect from the daring and apparently successful gunman. He laughed, and that also charged the atmosphere. When he spoke he had undivided attention:

"You would have run like any other scared puppy," Bill said to Siebold. "We would have listened to you ki-yi-ing for about a mile. Say, look here, you hazers: You're a bunch of muts! Hear me? The whole lot of you couldn't haze anybody that puts up a fight, if you played anyway fair and gave a little notice. We'll give you a dare, Siebold, you and all your deputies, though I suppose you'll send them and hang back yourself. We'll be ready to take all the hazing you fellows can give to-morrow afternoon at about three o'clock; only there isn't one of you who will have the nerve to show up. Oh, 'no weapons?' That was only a cigar case I pulled on you to-day. It wouldn't shoot, but, by cracky, it worked!" And Bill laughed, with Gus and a few others who admired the boy's nerve.

There was a sensation at once. Never before in the history of the school had a freshman dared the upper classmen to haze him, or had named the time and place. Would such a plan hold out?

It would, and it did. The very novelty of the thing had assured it, as Bill expected. Some little time before the hour given, a number of would-be spectators began to gather in the hallway, as Bill and Gus, studying in their room, could tell from the tramping of feet outside their door. Then there was the louder tramp of feet coming nearer and without a preliminary call or knock the door flew open. The chums looked up from their books with well simulated surprise. In the doorway and crowding behind stood several upper classmen and easy confidence was written all over their eager faces.

"Come right in, gentlemen; we are at your service," said Bill.

"Ho, men! What's this? Wire entanglements?"

The question was opportune; flimsily stretched across in front of the attacking party and about shoulder high were some copper wires, and about equally spaced below were others. It could be seen that these offered no serious check, as anyone could spread them apart and push through. It was evidently with this intention that the hazers fairly struggled through the door in the effort of each to be first—at least half a dozen youths had their hands on the wires. Then Bill leaned back against the wall and his hand came in contact with a button.

Pandemonium! Cries of distress, yells of something more than discomfort, howls of dismay, calls for succor—the S O S in other than code signals. This was a very pretty chorus increased by some others who, hastily coming to the rescue, also became entangled. The rest, chiefly onlookers, refrained from too close acquaintance with the very apparent cause of all the trouble. But the

truly crucial part of the crisis was due to the fact that those who suffered by contact with the wires found it impossible to get away from the source of distress.

CHAPTER IV

GOOD WILL AND FIXTURES

BILL made another motion touching the wall button, and instantly, with a combined and very audible gasp, the seven youths relaxed, got away from the wires and stood up. There would probably have been a general retreat mixed with a volley of expletives hurled at Bill and Gus, had not Gus taken a hand in the prevention of this, as planned. A stream of water from a long syringe, aimed over the heads of the sufferers, had cleared the doorway of spectators. The jerk of a ceiling cord slammed the door shut and it was dead-latched, requiring a key to open it. The would-be hazers, thus trapped and fearful of attempting a further attack, turned, perforce, to face their captors.

But there was one fellow, Albert Shurtlief, who

so deeply resented the electric shocking that his desire for instant retaliation robbed him of caution. He was coming right over the wires again and did get partly through before another touch of the wall button gave him a second siege of writhing. The others looked on in wonder, convinced that the best thing they could do was to remain quiescent. Gus said:

"Let up on him, Bill, and if he wants to come through——"

Again the button. The still furious sophomore did get past the wires and was going to make a rush at Bill when Gus stood in his way.

"Now, please. You ought to go a little slow." That was a way Gus had in making a protest against what might end in a scrap. But without further ado, Shurtlief, who was commonly known as "Scrapper Bert," let fly an angry fist right at Gus' exposed jaw.

If the electrically charged wires had surprised the mischief-making upper classmen, the sudden

collapsing of their fistic champion shocked them even more. Scrapper Bert was rather noted for his prowess. No one cared to put on the gloves with him, nor to gain his displeasure. To see the new boy, a "measly freshman," not as tall, as heavy nor as old as Bert, catch the assailant's hard-driven fist in the palm of an instantly extended hand and then let drive with his own right a neat, short-arm uppercut that got Bert just where he had meant to get Gus, was a needed lesson to the smug conceit that too often goes with added school years. Bert, from a seat on the floor, which he had taken without choice of the spot, regarded his opponent through half-closed eyes with a certain nonchalance, his anger fled. He slowly got to his feet, climbed back through the wires without further thought as to their being charged, and stood with his companions, quite submissive and mute.

As usual on all occasions demanding words, Bill's tongue was loosened:

"Look here, fellows, we want to give you the right dope on this thing: You see we are here to study—to try and go through if our money holds out. Our people are not rich and, like Tom Edison when he was a boy, we've got to hustle on short allowance. And we really can't afford to be hazed, as you did that new chap yesterday. If we had to buy new clothes and watches and caps, we'd have to quit school—see? And we knew you never missed anybody much, so we naturally, asking your pardon, got up this nice little reception for you. Now to get right down to brass tacks, you see our position and respect it—everyone of you—and, putting yourselves in our position, you don't blame us, nor hold any grudges; isn't that so?"

Siebold, spokesman, made reply, after thinking a little.

"Oh, well, I suppose all is fair in war. You've had your innings now, of course, but we'll have

ours later." And then he added: "We'll get you."

From what Doctor Field said, Bill and Gus knew better. Hazing would be broken up on pain of expulsion, as it should be in all schools where the attendance is for business purposes, the getting of a technical education as a means of livelihood. The boys felt that perhaps in a college art course, where education becomes much play on the part of well-to-do lads, class fracases, bowl fights, initiations and the like may not be amiss, but they did not intend to let open brutality rob them of their chance to study. And, however sure they felt that Siebold's threat was idle, there would be a satisfaction in winning their own fight.

"Now, that's just what we want to talk to you fellows about," Bill declared. "You don't want to think about 'getting' us. We want you to call this all off and for good; we want you to give your word on it; see?"

"No; we can't—" began Siebold.

"Won't, eh?" Bill's words came sharp and clear. "Well, then, take a little more treatment for your blamed foolishness." And Bill touched another button.

The contortions, the writhings, the shrieks and cries that followed quite surpassed the former exhibitions. The well-worn woolen rug that fitted from wall to wall across the end of the room where stood the seven seemed to be charged with red hot needles. Suddenly these ceased to leap and jump and burn; the old rug and the hidden wires under it were again quiescent. But the strident voices of the afflicted prisoners were not silenced, though the late lamentings were given over to a medley of condemnations, appeals and pleadings.

"Say, go a little slow on this!"

"Call it off, confound you!"

"Are you trying to electrocute us?"

"Say, Brown, please——"

"Let's call it quits, fellows!"

"We'll call it quits if you want. I suppose we've

got to hand it to you two." This last from Siebold.

"Going to call it all off, then? Give us your word! We can't believe that any fellows in Marshallton Tech would go back on their word." Bill was smiling genially.

"That can't be called in question. All off. You're exempt." There was a general acquiescence to this. The door slowly and to the seven quite mysteriously swung open; the seven started to file out.

"Good-by, fellows, and no hard feelings. We were only having a little fun with you as you were going to have with us. You can't——"

"Well, but you two have still got to remember," said Siebold, shaking his finger at Bill and Gus, "that you are freshies and must keep in your places. You've got a little the better of us this time, but——"

"Golly, Dan," spoke up a fellow hazer, "a *little* the better? Strikes me we've all been good and licked and these chaps ought to get the credit

for—" The voice died away along the hall and Bill turned to his chum.

"We don't want any credit, do we, Gus? But we will get it just the same when this gets out. I sort o' think our little stock has gone up about one thousand percentum, even though we *are* freshies."

This proved quite correct. In a few minutes a lot of freshmen had crowded into the room and there was a sprinkling of sophs also. Questioned eagerly, Bill explained quite freely the purpose of the encounter and its result. Whereupon a big, fat soph declared quite vehemently:

"Huh! They were easily licked. No pluck. You're lucky to have run into a bunch of quitters."

"You wouldn't have quit, eh, Jumbo?" ventured another, grinning.

"Huh! Nothing like this contraption—" began the husky fellow, advancing and laying his hand on the top cross wire.

"Not even for a little thing like this?" queried Bill, reaching the wall button.

"Ow! Blazes! Quit! Don't! Oh, darn! Stop! Turn—it—off! E-e-e-e-e-! Help!" And the instant the stabbing current ceased, Fatty fell back from it and glared at Bill.

"You really can't blame them for quitting, can you?" asked Bill, and for answer the husky soph turned and fled from the room, followed by the jeering laughter of the crowd.

And that ended it. After Bill had asked the crowd if any or all of them wanted to test the "convincer," as he called the electrical rigging, he bade the onlookers who filled the hallway a pleasant *au revoir,* and Gus again pulled the strings that closed the door.

CHAPTER V

FAME AND FINANCES

NOTHING could have taken place to put the lads from Freeport on the pedestal of fame more noticeably than this experiment. They had easily and modestly staged a complete breakdown of the hazing habit at Marshallton Tech. Strangely perhaps there was no blame nor suspicion put upon Bill and Gus for the subsequent edict from the faculty forbidding it. That seemed to be considered a natural aftermath to the news of the electrical reception of the hazers.

The stunt did more than earn the boys a large share of fame. It made them so deservedly popular, even with most of the upper classmen, that they soon counted a good many friends and a considerable number of patrons for radio construction. It is a rather odd fact that methods

already mastered by those of their own age appeal to boys more than the teachings of their elders. So, although the students were getting, or had got, the theory of radio activity and the practice of wireless fully stuffed into them, they turned often to Bill and Gus for help. There were a number of the well-to-do, even among the seniors, who wanted radio receivers made, or coaching in making their own, and to this Bill and Gus responded out of school hours, with the consent of the president, thus earning a good many dollars.

So as not to interfere in any way with the school-shop program, and not to crowd those lads who were finding the room in the shop and the tools to their advantage, Bill and Gus rented an unused storeroom in the basement of the dormitory. They cleared it out, sent for their own tools at Freeport, purchased others—a foot-power lathe, a jigsaw and a hand wall-drill—and put up some benches. Besides working therein themselves,

they charged also the modest price of twenty-five cents an hour to others mechanically inclined.

The liberal-minded school faculty found no fault with an arrangement which could only mean a more thorough learning and a finer comradeship among the students. The professors, who often visited and even worked in the little shop—some of them paying their quota also—came to refer familiarly to the place as the "commercial and sales department."

Professor Grant, the very able teacher of physics, who possessed far more theoretical knowledge than practice, gave the boys many valuable ideas out of class, and got some himself, being also a deadhead. And Search, the manual-training teacher, who knew the use of tools as a bee knows honey, got a few ideas while imparting many, as he also was made welcome to tinker around the boys' shop.

These were truly strenuous days and weeks for Bill and Gus. They had little studying to do, for

Bill grasped problems as a trout takes in minnows, and he needed but to coach Gus briefly. The latter spent only a quarter-hour each day in the gym, never indulging in contests, but content to work hard at the things that best kept him fit. He had elected not to put himself under the instructor, grudging the time. But one day when he went over and, with his bare, work-hardened fists, punched a lively rubber bag for several minutes, Professor LeRoy, who had been watching, came to Gus with almost a demand that he join the boxing class in view of the Marshallton Tech entering contests with other schools during the coming winter. But Gus declined.

"No; I haven't the speed and I am weak with my left, as you may have noticed. Hurt it once on a lathe in my father's shop; never will be any good for quick work."

"We will overcome that," said the instructor, "develop it."

"Also," declared the boy, "I have neither the

time nor the inclination. Must work and nothing much else. But I thank you, Professor."

"Sorry, my boy; you've certainly got a wicked right and you can use the other."

"I'd want to use both," asserted Gus, laughing.

As for Bill, the hours each day and all of Saturday spent in the shop sufficed for exercise; the rest was spent in study, brief eating and no more sleep than he needed. And nearly every moment that could be spared found both boys in their shop.

They had under way the construction of five radio receivers of the finer type, for each of which they would get sixty dollars, the materials costing about fifteen dollars. These receivers were equal to more than a thousand miles, with strong, durable batteries and very wide amplification. As with their first radio and the one for their good old friend, Mr. Hooper, they made nearly all the parts themselves, even to the switch arms, contacts, buzzer and binding posts, cutting all threads with a fine set of standard taps and dies.

They also had two crystal sets to make, for which they charged twenty dollars each, and made a profit of seventeen dollars over the cost of the materials.

The most interesting was the making of four portable sets, with vacuum tube detectors and loop aërials not over six inches in diameter, each packed in small, neatly made wooden cases about the size of an ordinary paper shoe box, the lids when opened forming the upright panels and the loop aërials hinged to open out and upright. Being rather unique in design, and satisfying fads for unusual construction, the boys felt they should get at least fifty dollars for each of these sets, the materials costing about twelve dollars.

Earning enough in this way to help them along very nicely with their schooling, and being more deeply interested in their work than in anything else, it was not surprising that Bill and Gus found little time for play.

When they had finished one of the larger and

two cheaper sets, that upon installation at fraternity and boarding houses were found to work most satisfactorily, the cash was quickly paid over. Bill divided it equally and handed half to Gus.

"No, you don't, old fellow!" Gus demurred. "You get this and you can pay me a sort of wages if you want to, or you needn't. You did all of the planning, the—" He got no further for Bill started in with this indignant tirade:

"You're a fatheaded, heterogeneous, quadrangular parallelepipedon! What are you trying to get through your topknot, anyway? Don't we always work together? Isn't it a partnership?"

"But—er—Bill——"

" 'Butter bill'? Sure. This will pay our bread bill, too, and our entire board bill for some time. And what we'll get out of these other sets will see us through all of next year nicely, without worrying. Then something will turn up for the third year. Now, then, will you write to Cotton & Staples for that additional wire, or shall I?"

"I will, of course, but this money——"

"Oh, shut up! If you say another word about it, I'll lam a battery coil at you—'b'gorry'—as Mr. Hooper says. Well, now, reckon I'd better turn up and thread some more binding posts."

CHAPTER VI

ANOTHER FELLOW

It was in and over the work of the boys' shop that Bill and Gus first met the Italian student. Among the upper classmen they had noticed a small, olive-skinned, black-eyed chap, with a rather solemn face, who appeared to be very reticent. It was said that he was a close and a bright student who, though not lacking for money, took little interest in sports, belonging only to the "bruisers," as the boxing class was called. One afternoon, with Gandy, who was getting a radio set made, the stranger appeared and stood in the doorway, gazing at the busy workers. At first neither of the radio experts saw him. Then he advanced.

"I have the desire very much to make for myself complete a radio getter—ah—what you call? Yes,

a receiver." He addressed Gus, who was laying out the hook-up for a crystal set.

"There's nothing very hard about it," Gus replied, looking up with his ready smile and scrutinizing the Italian boy.

"You pay the right here, the privilege; is that not so?"

"Yes, we rent the room," said Gus.

"Ah, so; but I mean—" The newcomer turned partly toward Bill who drew near at the moment and had overheard the question.

"You mean we charge those who work here? Yes, for the use of our tools and machines, but not for any hints and advice we can give. The school shop is at your mercy, too, without charge, as you know." Bill also sized up his questioner with a certain curiosity and was pleasantly impressed.

"I do not like the school shop. There are so very many con—con—what you call it? Yes,

conflicting. I should like—prefer—choose to come here, if I may do so."

"Come along. You keep account of your own time here, and you can pay us when you like. You can get your own materials, or we can get them for you at the prices we pay. We bought up some old pieces of furniture cheap to cut up for bases and cabinets—enough walnut to make a hundred. No charge for it. Help yourself."

"You are, I wish to say it, veree liber—kind—generous. It is too little that you pay—charge, I mean it. I will ask for your materials and I will commence—begin—start, eh? on to-morrow. Will that be satisfy?"

"Any old time. If we are not here, walk in and go to it. Check your hours up on this pad, see? What is your name?"

"Anthony Sabaste it is. I am called Tony by most. My country it is Italy, but American I now am. My father is of the city—living there. Here, now, I will pay you five dollars on acc——"

"No, you won't," said Bill. "We'd rather have you pay after a while and you can see that the work goes all right. Here, I'll show you the ropes."

"Ropes? But I care not to make—build a ship. It is a radio——"

"Oh, sure, I get you; but that's only slang. You have been here long enough, I should guess from your talk, to get on to our American guff. Well, we're glad to know you, Mr.——"

"Sabaste, but I best like—I prefer calling me Tony. It means in your language, I get on to it, as fine, grand, fat—no—but swell out—somebody much, eh?"

"It does, sure! I'll introduce my partner, Augustus Grier; Gus for short, or he'll get mad. They call me Bill Brown, generally forgetting the Brown, even here at school, where 'most everyone gets his last name. First names are more friendly."

"I like it, too. In my native it is more mostly

Signor, even to young—what you call it? Kids, as us, eh?" Tony smiled genially, his face lighting up most agreeably. "Some they call me 'Wop,' or 'Sphagetti'."

The boys learned that the intelligent young foreigner was in the graduating class which had escaped a lot of practical radio work; that he kept much to himself, either because of a real or fancied notion that social lines might be drawn against him, or because he was naturally unsocial. But after he began the making of a radio set and came in daily contact with Bill and Gus, the young Italian seemed to grow a little out of himself, becoming less reticent and secluded. The good fellowship of two lads a little younger than he, both giving him friendship and confidence, laughing at his errors of speech in perfect good nature and without ridicule, and at their own foibles as well, compelled the Italian boy to like the country of his adoption much better than he had before. This he expressed to Gus:

"You like me—no, I mean I you like. Yes, that is making to laugh, eh? Funny, very. Well, I mean to say it, you and Bill very much also. Why not? You love the live. You love the study. You make the happiness. You have the great—the large, eh? the big heart. All to you is nice and fine and it is equal to the doing, but you say it, it is worth the while. This makes good-will and kind thoughts to others, also by others—no; from others. You are like one *dolce* picture in my home. It is by two little birds fabricating their nest and all the time thus they are of song, singing, gay with living and working, helping so much always also to make all the country, this old world happy and satisfy—content. So, to my—to me, you are really it, eh? You are the real thing."

"If Bill had heard you say all this, Tony, he'd declare you're both an orator and a poet," said Gus, laughing.

"And neither am I. But of my country there are many of such, and of learning also, science,

the great learning. Many large men of the yesterday and many of the to-day also. In this work, too, the first, for is not Marconi——"

"Say that name to Bill and hear him shout some praises."

"So? And will Bill speak good—noble—high of Signor Marconi? Then I, too, can speak noble of Signor Edison, the American. But what say now if I can tell it to you that my father, he is one sure and big friend of Signor Marconi. Our home, in Italia, what you call—the estate of us, it is not much a great distance from Signor Marconi of his estate. Often I have seen him. And so you understand?"

"By cracky! Radio must have been in the air over there and you caught it!" declared Gus. "Nobody could have it down any more pat than you have. Bill and I have got some dandy ideas from you."

"That we have," agreed Bill, thumping in. "What is it now, Gus, that our friend——"

"Why, Bill, Tony knows Marconi! Just telling me about it." And Gus went on briefly to repeat that which the Italian had related. Bill, to use a terse but slangy term, proceeded to go up in the air.

"Why, holy cats, Tony, you are from henceforth the cheese! This school has gone wireless mad,—you know that,—and the country is pretty much in the same fix, and for the reason that radio is about the biggest thing in the world. And, fellows, this just fits. We are doing things—everybody is—in radio and now we are going—this school is going—to honor the situation if we can start it that way. For, fellows, Marconi's yacht, the *Elettra,* is in New York Harbor, with Marconi on board most of the time. And Tony, we'll get Doctor Field to let us have a whack at the transmitter and you can talk to your friend, or telegraph your dad and have him come up and radiophone Marconi. And then we'll listen in

for his reply, for I've read he's awfully fine and good-natured. Isn't that so?"

"It is so, sure and indeed!" declared the Italian youth. "I am overenjoyed; you say so, eh? that we shall do this. Let us now go, upon this moment, and talk to the good doctor. There will be no lecturing at this time over the casting abroad——"

"The broadcasting transmitter? No, we can surely get a whack at it."

CHAPTER VII

MESSAGES

Doctor Field, much interested, accompanied the boys to the school broadcasting room, and after determining from some data at hand the wave lengths that would be receivable on the Marconi yacht, Tony began talking earnestly, almost too rapidly, into the horn, the crack and buzzing of the battery charges making a sound like that of a rifle gallery. The president, Bill and Gus also had receiving 'phones clamped to their ears.

"If he doesn't mind, you might ask him to reply in English, please," requested the Doctor, and Tony nodded.

And presently a reply did come, though in Italian. Tony got it, at some little length; then with a gesture of disappointment he turned to the others:

"It is an attend—an assister. He informs me that the wireless wizard, Signor Marconi, whom I explain is a friend to me and my family and he know our name, that the signor is away on the earth—no, on land, you say it,—attends some occasion, or is entertain of American friends and he will not return this many hour. So that it is no value, or you say useless, to cast wide to him again now at this moment and I am, as you say, deject?"

They all laughed and cheered Tony with the assurance that there would be another occasion. Then Bill offered his idea to the president:

"Doctor, we have a notion that this radio business right now ought to have a sort of celebration 'most everywhere; and our school might set the example. Radio is getting to be an awfully big thing, nearly as big as the movies. And now here's Marconi. Couldn't we start a general hurrah for radio, bring the apparatus down to the assembly room, have a big concert, send out some

messages and get Tony here, who knows Marconi, to give us a talk on the inventor of the wireless when he was a boy, and that sort of thing? Of course, if this would interfere with studies, or——"

"It need not, Brown, it need not in the least," agreed the president. "I like your idea immensely and I foresee some features that we can add. Suppose we fix it for the latter part of this week, handbill it in the town also and make it a gala occasion. It is another way of calling attention to the school and the kind of work we do here. You will all help Professor Grant and the janitor with the mechanical details, which should not take long. And if Sabaste will communicate with Marconi so as to make sure we can get a message from him, that will be the climax."

The idea proved immensely popular. There are many such plans for calling students together to instil interest in various things that prove "wet blankets" when put into operation, but radio, as

elsewhere, had taken the school by storm. Separate departments had been organized this year for it. It was equally an interesting plaything and a source of mental gymnastics. It was a matter of curiosity, and not to be interested, was to be out of the swim.

Bill got busy, as hardly ever before in his strenuous career. Because of his uncertain English, Tony balked at giving an address on Marconi, so Bill copied facts and wrote the whole thing out for Tony to memorize, putting in many of the Italian's phrases, corrected. And getting the *Elettra* again, Marconi's former and youthful neighbor was able to make a date for a message from the wireless wizard on the evening of the radio celebration.

That night there was a crowd in the assembly room. Every student was there, half the town, many people from the country around and a few friends of the school from various distances. Doctor Field introduced the occasion briefly. Pro-

fessor Grant gave a talk on the history and rapid growth of radio communication. Professor Judson, assistant in physics, talked on the "little bottles," as the vacuum tubes are often called. Professor Search talked on the possible future of radio. Then the Doctor arose again and said:

"We want to have members of our student body, also, express to you our interest in this great subject. We are fortunate to have this year a pupil who, though yet a freshman, has shown an unusual grasp of the technicalities of radio. I am going to ask Mr. William Brown to explain briefly some of the methods employed in building, or selecting, a radio receiving set, such as those he has been engaged in making here at the school. His associate, Mr. Augustus Grier, who is an artist, in mechanical matters at least, will aid Mr. Brown at the blackboard."

Bill laid aside his crutch and hobbled forward to the platform, followed by Gus, whose easy motions were in direct contrast. A round of applause

greeted the boys. This was increased and a burst of laughter added when Gus took a piece of chalk and with a few quick strokes made what suggested a broadcasting station, with a rooster shouting "cock-a-doodle-doo" into the transmitter. Then he drew a lot of zigzig lines to indicate the Hertzian waves, and at the other end of the board, a hen listening in and registering horror when she hears the sounds translated into "quack, quack." Meanwhile, Bill had plunged headlong into his subject.

CHAPTER VIII

RADIO GALORE

"A good many folks," said Bill, "get scared when they think about radio construction. The big words come at them all in a bunch like a lot of bees, and it is to dodge. And when they go to the dictionary they are lost for sure. Potentiometer, variometer, variocoupler, radio frequency, amplification, loop aërials, audion and grids—no, I am not saying these words to show off. They are only a part of radio terminology. And you've got to get 'em, or you might as well take radio theory and construction on faith and be satisfied simply to listen in.

"Anybody can commit these words to memory without a dictionary, and that's where my partner shines. He has heard the big words so much that he talks them in his sleep, and he ought to know

all their meanings, but the one most his size is 'grid.' "

Here Gus drew a much scared boy, with hair on end and knees knocking together, surrounded by a lot of the words that Bill had pronounced. Then Bill, putting his hand to the side of his mouth and leaning toward his audience as though in confidence, said in a stage whisper:

"He's doing that to show that he knows how to spell these words.

"To be serious about it, if I'm allowed," continued Bill, "this subject of radio is a coiner in every way. Just think of someone saying something in San Francisco and someone else in Maine listening to it, and without any speaking tubes, nor wires to carry the sound along! A good many folks are wondering how it happens—how speech can be turned into electricity that goes shooting in all directions and how this is turned back into speech again.

"Well, it's done on the telephone, over wires.

The voice in the receiver is turned into electric energy that passes over the wires and at the other end turns again into sounds exactly like the voice that started it. But somebody found out that this same energy could be shot into the air in all directions and carried any distance, maybe as far as the stars, and then when pretty much the same principles were applied to this as to the telephone, with some more apparatus to send and catch the energy, why, then, that was wireless.

"It is really too bad, with all the useless short syllables in our language going to waste, that the fellows who got up the terms for radio work couldn't have used words like 'grid,' for instance. They could have called a variocoupler a 'gol,' a potentiometer a 'dit,' an induction coil a 'lim,' (l-i-m) and a variable condenser would look just as pretty if it were written out as a 'sos'—but no! They forgot the good example set by the grid, the volt and the ohm and they went and used jawbreakers.

"I'll tell you another thing that makes this electro-motive force as used in wireless easier to understand. It is the sun and its light. A great scientist, Doctor Steinmetz, says that light and electric waves are the same thing. Perhaps they are, though they surely work differently under different conditions. But if the sun has an awful lot of heat it can't send it ninety-five million miles —not in reason! The heat only makes light and that light travels through space. It reaches the atmosphere of our earth and is converted into heat again. Perhaps light of the sun and stars and the reflected light of the planets do not shine through space as light, but as radio waves that either by our atmosphere, or by our electrical conditions here are converted into light again,—but this is hardly open to proof even."

Bill glanced at the blackboard; Gus had drawn a big sun, with radiating rays, a grinning face, a small body with one short leg and two gesturing hands and had labeled it "Bill Brown, radio radia-

tor." Bill made a motion of his thumb toward the caricature, then spread his hands in mock despair, but not without a side glance expressing pride in his lieutenant's performance, all of which pleased the audience immensely.

Then Bill proceeded: "This electro-motive force which travels around and through our little earth is what we can actually experiment with. We do not know just what it is, but we are finding out pretty fast what it will do. Perhaps there is hardly any limit to what it will do. It is generated for power and light and heat, for carrying signals and sounds over wires and through the air. What next? Just now we have got all the thinking we can do about radio. It is the sixth wonder that electricity has sprung upon us. I guess we won't include electrocution.

"Now, there's no use going into technicalities about construction, that's a thing that must be studied out and thought over, not mussed up in a talk like this. I'll say this much, however, it is

the vacuum or audion tube detector that gives results, and the application of a loud speaker is only possible with a vacuum or audion tube. It is as easy to build a vacuum tube set as a crystal set and only a very little more expensive. So, whether you are building or buying a set, make it a good set, something that you can hear with a good many hundred miles.

"Now, you can buy the parts and build a receiving set that will generally give more satisfaction than a bought set." (Bill stepped over to the blackboard and took up a pointer.) "I may need this for this partner of mine if he persists in caricaturing me instead of drawing what we want. We'll make things about four times as big as they ought to be. You can use an aërial outdoors, which everybody now understands, or, just as well and a lot handier, a loop aërial indoors, the bigger the better, but two feet in diameter is big enough.

"Here is your base and upright panel and this is the way to hook up or wire the parts. Here's

your aërial and its ground, between which is placed your variable condenser and tuning coil, thus, off here between condenser and coil comes the wire to your vacuum tube, with its fixed condenser and grid leads, the wire being connected directly to the grid, while here the wire from the tube plate is connected with the six-volt storage battery and in turn with the phones, like this. Then, from the phones to the ground wire, the wire is carried thus through a secondary dry cell battery, on each side of which the wires are taken off to a rheostat, though my partner has sketched this to look more like a bird after a caterpillar.

"I am not going to tell you how to make all these parts—if I did you'd probably go to sleep, if you are not half way there already. So, if you can't find out how to make the parts, or contrive them in some way yourself, why, then, you'd better buy them. Only you can make the base and do the wiring, attaching and so forth. Even my

partner can do that if he is watched pretty closely; it is almost as easy as making a sketch of it.

"If any of you really want to know how to build a radio set in a practical, get-there way, all you'll have to do is to get Doctor Field's consent and come round to our shop in the basement of the school dormitory and we won't soak you much. I thank you all for your attention."

Very warm applause indicated the approval of the audience, as Bill and Gus left the platform. Again the president arose to say:

"Another of our students has a message for us in regard to radio. Among the notable pioneers and probably one to give the subject its greatest practical impetus is William Marconi, whose name is familiar to you all. The great inventor is now an honored guest of this country, his yacht *Elettra* lying off our shores. It seems doubly fitting that more than special mention should be made of him, and as Mr. Antonio Sabaste was, in

his native land, a neighbor of Marconi, his father being really a friend of the wizard, I think we shall listen with pleasure to what this student of the school has to say."

CHAPTER IX

MARCONI

"My native country," said Tony, speaking very slowly in an effort to get the construction of his sentences in accordance with Bill's coaching and as per his written arrangement, "is Italy; my adopted country is America. I say both with pride, and therefore you can imagine with what delight I speak about one of the greatest of Italians and one of the greatest among the scientists of the world, to Americans who perhaps most appreciate and make use of his discoveries.

"Guglielmo Marconi lived not far from Bologna. His father's estate is called 'Villa Griffone.' Not far from these many acres was my former home, and my father, who is a little older than Signor Marconi, knew him well, as well indeed as anyone might know one who was from

boyhood a rather shy, retiring fellow, with a mind given over largely to mechanical experiments and caring very little for playfellows.

"Signor Marconi, the elder, was proud of his son's tendencies and gave him mechanical toys when Guglielmo was only a little fellow. His mother was a beautiful English or Irish lady and she also encouraged her son in his tastes. Electricity had a strange fascination for the boy and as he grew older and began to grasp the theories and methods employed in its use he addressed himself more and more to electrical phenomena, never being content with mere performances, but being eager to know the precise methods of application and effect.

"At first Guglielmo had tutors and he led them a merry chase to keep up with his questions. Then, when still young, he was sent to an advanced school in Leghorn, later entering the University at Bologna. But with all that he learned of theory and practice concerning what had be-

come his hobby, he obtained more knowledge at home, for his investigations were not along discovered routes, but in new fields.

"When Guglielmo was only sixteen his father had provided him with all the instruments and apparatus he could wish for and he knew no handicaps of this kind.

"In this country a poor boy, without social hindrances, has an equal chance with a rich lad. In my native land, in Europe I think, the lad with means has a better opportunity. Here you have many great men in every walk of life who have been poor, but over there that is a rare thing. Wealth brings opportunity and quick recognition. Guglielmo had this advantage, but if he had not also possessed an earnest, painstaking and brilliant mind he could have gained no distinction. Most of his acquaintances led pleasure-loving, easy, indolent lives and he could have done the same thing. Therefore, what credit is due Guglielmo for the great success he has achieved!

"While Guglielmo was still in his teens he turned his father's estate into a vast laboratory and experimenting station. His great success seemed to come from using all outdoors as his workshop.

"In this way he learned the magic of sound waves and vibrations, so that he could send his 'telegrams' without a wire. His first experiments were for only a few yards. Then he made the distance longer and longer, little by little, till at the end of five years of constant, persevering trial, with thousands of failures to be sure, he sent an air message two miles.

"Of course, people made fun of him. They thought he was a crank, if not downright crazy and said that his father was very foolish indeed to encourage him in wasting so much time and money in a way that every person with common sense could see was worse than merely simple.

"Guglielmo set his rude transmitting apparatus on a pole on one side of a field and on

the other side a corresponding pole was set up and connected with a receiving apparatus.

"The young inventor's interest must have been keen and his hopes high as he sat and watched for the tick of his recording instrument, that he knew should come from the spark sent across the field. Weeks had been spent in the building of these instruments, now to be tested.

"Suddenly the Morse sounder began to record the distant transmission and the boy's heart gave an exultant bound—the first wireless message had been sent and received.

"Many experiments followed. Varying heights of poles were used and it was found that the distance could be increased in proportion to the altitude of the poles.

"In these first experiments of the young inventor he used practically the same methods that he employs to-day. The transmitting apparatus consisted of electric batteries, an induction coil by which the force of the current is increased, a

telegrapher's key to make and break the circuit. Batteries were connected with the induction coil and the telegrapher's key was placed between the battery and the coil.

"One spark made a single dot, a stream of sparks the dash of the Morse telegraphic code, and with this crude apparatus, sometimes failing to record the signals, Marconi labored with growing faith. He knew he was on the right track and persevered. When he had succeeded in sending a message two miles through the air, Guglielmo determined that it could be two hundred, or two thousand miles, but he chose a shorter distance to prove his theory. He went to the English Channel and before long the world was astounded to learn that this young stranger and experimenter had sent a wireless message over thirty miles. A little later dispatches were sent through the air across the English Channel and received from the Isle of Wight to Land's End, more than one hundred and eighty miles distant.

"This youth, twenty-one years old, had succeeded in accomplishing a feat the possibilities of which can hardly yet be conceived. Then Marconi came to London to upbuild and link nation to nation more closely. He was well received in England and began his further work with all the encouragement possible. A series of tests followed that were astounding. Messages were sent through walls, houses, through hill and dale, proving beyond a doubt that the electric waves penetrate everything.

"A few years later, when Marconi was twenty-four, he made wireless reports of the Kingston regatta for evening papers in Dublin, Ireland. This attracted Queen Victoria's attention at her summer residence at Osborne House, also on the Isle of Wight. At this time the Prince of Wales, who afterward became King Edward the Seventh, was ill on his yacht. This was soon connected with the Queen's summer castle and one hundred

and fifty messages passed between the suffering prince and his royal mother.

"All these wireless marvels—they seemed miracles then—made William Marconi world-famous before he finished his twenty-fifth year.

"But Guglielmo—I like the Italian pronunciation of his name better," continued Tony, "for I am afraid, if I did geeve the English form, I should turn it into Beel." He smiled at our hero who had come down from the platform to a front seat and sat listening intently, and Bill Brown shook his head deprecatingly.

"Guglielmo did not cease with these triumphs. No, not he. He saw success only in greater distances and he went at this problem with his usual quiet determination. He made no announcements, but sailed for the Island of Newfoundland and there he set up his instruments in an old barracks at the mouth of the harbor near St. Johns. In a few days his preparations were made, quite secretly. His plans were communicated to no

one, except his assistants, for he knew there would be the general skepticism concerning his effort to send wireless messages across the Atlantic Ocean, but he felt assured of success. A transmitting station had been established near Poldhu, Cornwall, the southwestern point of England. The aërial wires were on masts two hundred and ten feet high.

"As an aërial Guglielmo sent up a large kite made of bamboo and silk, flown on a wire, of course; the wind increased, snapping the wire and blowing the kite into the ocean. Thereupon Guglielmo used a balloon filled with hydrogen gas and sent it up when the weather was clear, but the balloon broke away and disappeared.

"It was on December 12, 1901 that he sent up another kite. This held at an elevation of nearly four hundred feet, and then, after having cabled his assistants to begin sending certain signals previously agreed upon, at a certain hour in the afternoon and continuing until night, Guglielmo

made allowance for the difference in time and sat with the telephone receiver at his ear, listening, wondering, hopeful. It must have been a moment of almost painful expectation. He looked out from his position high on the cliff and could see the dim, rocky outlines of Cape Spear, the most eastern point of the North American continent. Beyond this rolled the blue Atlantic, two thousand miles across which was the coast of the British Isles. Only two persons were present in the old barrack-room besides the inventor. There were no reporters—no one had been apprised of the attempt. Marconi's faith in the success of his experiment was unshaken. He believed from the first that he would get signals across the great stretch of ocean.

"Suddenly there was the sharp click of the instrument that could only come from some electric disturbance; but it was not the signal. Marconi, without excitement, asked Mr. Kemp, the assistant, to take the telephone receiver connected

with the instrument and listen for a time. A moment later, faintly, yet distinctly and unmistakably, came the three clicks indicating the dots of the letter S, according to the Morse code, the signal that had been agreed upon with the assistants on the English coast. A few minutes later more signals came and the inventor and his assistant assured themselves again and again that there could be no mistake. Thus was tested successfully one of the great scientific discoveries.

"Then the achievement was given to the public, after two days of repeated signaling. The honors that were at once heaped upon Marconi would have turned the head of anyone less modest and sane. From every quarter of the world came plaudits. The cable company, fearing injury to its business, demanded that he cease operations in its territory, which was a high compliment, indeed. The people of the Colony of Newfoundland honored him, wondering at his youth; he was

then only twenty-seven, but an experimenter of wide knowledge.

"Such was the practical achievement upon a great discovery reached by Marconi the Italian and now, more correctly, the cosmopolitan. Though he still makes his home in his native land, he belongs to all countries, to all oceans, for it is everywhere now that his great discovery is made use of. No need for me to mention the present day uses of wireless telegraphy and radio communication aided greatly by the inventions of others. But it is to Marconi these owe their initial adoption."

CHAPTER X

A MESSAGE

A ROUND of applause was given the Italian lad as he was about to leave the platform. Suddenly Tony stopped and held up his hand for silence.

"You must not—ah, applaud to me for this speaking. I have the inspire to do it, yes, but not the words entire. So it is my friend Brown who set me correct on the words and the speeching. We are then both equally the speechers, my friend Bill Brown and I."

The applause was continued now,—a goodly number appreciated the honesty of this declaration. Tony had taken his seat. The president arose and began to talk again, but could not be heard for some mischief-making students who kept up the racket.

Gus leaned over and spoke to Tony and then to

Bill. Without more ado Bill got up, grabbed Tony's hand and the two got out on the floor, faced about and bowed. The clapping took a spasmodic leap and ceased.

Bill pushed Tony away from him and limped back several feet. Then he put his hollowed fist to his mouth and shouted into it:

"This is broadcasting station P D Q! I hope you are listening in!"

Tony caught the idea at once and put his hand to his ear. Bill continued:

"Strikes me this crowd here is crazy! A noisy bunch! Maybe they think we're candidates for mayor, or something! This radio business is some pumpkins; eh, boy? I'd radiophone you a message in Italian, only I've left my dictionary at home! Well, I guess they've looked at us long enough now, so let's switch off!"

Amid laughter, the boys returned to their seats.

"This is a gala occasion," said Doctor Field,

"and you must bear with the exuberance of our youthful enthusiasts. We have one other interesting experience for you, demonstrating the wonders of radio. Now, then, Mr. Sabaste, if you will——"

Tony and Gus quickly left the room. Presently, through the open door and from above, sharp, cracking sounds something like miniature pistol shots were heard. There was also a droning buzz and the sound of a loud speaking voice, the words unrecognized. The president added:

"Mr. Sabaste is now broadcasting a message, in Italian, to the yacht *Elettra,* outside New York harbor. He previously appointed this hour to send such a communication to none other than *Signor* William Marconi, asking him for a message to our school. We hope Sabaste may be successful."

In a few moments the sounds from the transmitter in the broadcasting room ceased. There came a brief period of expectant silence, some of

the audience staring about uncertainly, others more intelligently looking at the big horn of the receiver on the platform table. The time lengthened. It threatened to grow a little tedious. Then as Tony and Gus hastily appeared in the doorway, the sound of a human voice and good, clear English words emanated from the horn.

"The yacht *Elettra,* Marconi speaking. My young friend, the son of my friend Sabaste, now a citizen of America, has asked me to send a word of greeting to the Marshallton Technical College, —I hope I have the name correctly. I confess my being called on seems rather unusual, but yet I am glad to be able to communicate with an American educational institution, especially one devoted to physical knowledge, mechanics and electricity.

"It is not unlikely you have among your students some future great inventors—perhaps some Edison, Bell or Morse—time will only determine this. America is a nation of inventors—the leaders in this mechanical age. Study, close applica-

tion, the not too stringent adherence to formulæ and old methods are bound to win. Inspiration, vision, the seizing of opportunites to improve, the wish to gain something desired—these are the keynotes to success in the field of mechanical endeavor and scientific discovery. In the words of one of the greatest Americans who had visions and did things: 'It is up to you.' I wish your school and its students every success."

The voice in the horn ceased to be heard. There was a moment of breathless silence, as everyone in the audience, with attention riveted on the radio receiver, listened for other words to follow. Then once again the Doctor was on his feet.

"We shall later radio our gratitude to Mr. Marconi for this kind and helpful message which is a fitting climax to our wireless celebration. We feel that our students have been benefited and inspired and we hope you have all been entertained. Good night."

CHAPTER XI

FEUDAL FOOLERY

THERE seemed to be a dissatisfying influence, a feeling perhaps akin to envy, or at least as offending class pride in the sentiment that arose among a certain clique concerning Bill Brown. The boy had become popular and it was thought by some unduly, or somewhat undeservedly so. Bill's classmates had not shown this tendency, or if so individually it was not made evident. But to certain older fellows, that a mere freshman should so shine both in the opinion of teachers and the student body generally, seemed most inconsistent.

Siebold, the moving spirit of wholesome mischief among the upper classmen, seemed to be the chief instigator of the tendency to belittle Bill, aided by one Luigi Malatesta, a Sicilian. Siebold never had forgiven Bill and Gus for the electrical

trap sprung on his hazing party. He had a certain following that shared most of his opinions and plans.

Malatesta was also a soph, with a very decided penchant for getting into trouble and showing temper. It might have been expected that between the only two natives of Italy in the school there would be at least some fraternal feeling, but these lads appeared instinctively to avoid each other, and Tony's being a senior, made this easily possible on his part. Malatesta, seeing that Bill and Gus were both exceedingly friendly with Tony, seemed to take especial pleasure in making contemptuous remarks concerning all three, or in making offensive, insulting gestures that they could not help seeing. At first this was altogether puzzling because the motive was not apparent. It became more evident, however, following an incident.

Bill and Tony were coming from the school library, to be followed later by Gus, who remained

to add some notes. The subject with which they were all wrestling covered voltmeter tests and relative amperage, principally with regard to battery construction. The boys were building their own batteries and must make no mistakes.

Bill was thumping along, talking, and Tony listening, as usual. They came through the double swinging doors of the dormitory on the way to the shop and passed a small group of upper classmen in the hallway, Malatesta among them, holding forth. The two went down the basement stairway, a door closed behind them and they were alone. Tony stopped.

"I may ask you, *mio amico,* you did see that fellow, my countryman, up there?"

Bill nodded, wondering.

"Well, it is so," continued Tony, "that he watches us—you because of me, and me because of—to tell you it is something, shall I? Yes, it will give me satisfy. That Malatesta—Luigi his name it is—why you think he comes on this school?

I will say he comes to spy to me. Perhaps you think this is absurd quite, but not so. In Italy his people and my people are at fighting—no, you call it 'scrap,' eh? We make war, by family. My mother's people, one of the years long ago, kill one of this fellow's people at the town *festa* and they seek to kill all her people and my father's people take no part—know nothing. But when my father meet my mother and they are declared to marry, then the Malatesta fight with him and his people. Is it not strange and very ridiculo?

"And now I am come to the family war because no more longer a little child and this Luigi he swear he look after me here in America, and already I see the poniard lifted to strike at my breast, but I shall dodge and then maybe use my own, though hating the vendetta—feuds. Why shall all this be? How have I made anger and strife with these assassins? But to reason with them is to invite a more insult than death. You understand my telling?"

"Sure I do," said Bill. "It is what we call in this country a feud, but it is rotten. Why don't you go to the Doctor and——"

"Oh, no! My friend Bill, you cannot intend so. That would be poltrone—coward! We fight without people stopping—to end, if must be."

"But a fellow like that—to come to school here just——"

"Oh, but he is smart, Luigi Malatesta, and to him learning is also good, though some of his people are low and many years ago they were of the banditti. And some were of the boat builders and some were rich."

The boys had reached the shop and were still alone. Bill forgot his loved problems in trying to comprehend this state of affairs.

"But I can't understand how such a thing could really be," he said. "We have the black hand, it is true, but——"

"Ah, no, this the black hand is never!" declared Tony. "This is of families—not to rob, though

maybe they do rob in time and ask of ransoms. Such was done by some Malatesta of my mother's cousin and he was lost to us, never returning."

"But, confound it, Tony, here he wouldn't dare——"

"Here he will dare more than in Italy, because there all who make family wars are suspect and many such quit and have become friends when time goes, but other forgetta never. This Luigi he forget to never, and maybe you will see. We—my father thought we had left behind this fighting, but to this country also come Malatesta, for small is the world and large is hate."

Bill pondered this and turned to his work, but dropped his tools in a moment, explaining to Tony that there were other figures they must have for calculating the strength of the battery and he would go back and tell Gus.

Bill reached the basement stairs, and in an alcove, alone, as though seeking to hide, was the fellow Luigi. He turned sharply, facing Bill and

glaring in evident resentment at the latter's broad, curious stare. Then the Sicilian spoke:

"Well, you see me. I it is, freshman. Stare at me some more as if I were something to step on and I will give you more reason to stare."

"What's the matter with you, you, you—" demanded Bill, stopping short and much incensed.

"Ah! Wop? Guinea? Dago? Sphagett—so I am insulta—is it? And by a short-leg!"

"I'd rather have short legs than short brain."

"I like you so well I smash you in the face!"

Suiting the action to the word Luigi advanced upon Bill, who turned and swung his crutch menacingly.

What then would have occurred it is impossible to surmise, for the crippled boy was handy with the familiar implement that so readily could be used as a weapon, though the Italian was sturdier, heavier and much older—in fact, although small, he was almost a man.

But just at the moment there was a quick, de-

scending footfall on the stair and the door opened. Gus, with wide eyes, stared at the near and unequal combatants.

"Hold on!" said the big fellow, glaring. The Italian hesitated, though but for a moment. "You wouldn't really hit a fellow who is lame, would you?"

"Ah, get away! Go off!" snarled Malatesta, attempting to thrust Gus aside as the strapping youth stepped in front of him. But the thrust was futile and then Luigi, growing furious, struck at Gus a powerful blow. The fellow was muscular and quick, but there was no thought behind the blow. And there was in contrast a smile on the face of the easy, athletic American.

The Italian's fist was clutched by a ready hand, much as a baseball would have been caught, and then a very differently directed fist shot out and came in contact with Luigi's upper stomach—he got that generally final solar plexus blow. Luigi

gave a soft, aching grunt and sank to his knees, then to his elbows and rolled over on his side, in a half-minute more sitting up and gazing around, but still in pain. He was again alone.

CHAPTER XII

TESTS

"I SUPPOSE now we'll all get blown up, or poisoned, or something," Bill said to Tony, after telling of the eclipse of Luigi Malatesta.

"Oh, no; the Malatesta are foemen worthy of our steel, to agree by an English poet; is it not?"

"'Foeman worthy of a steal,' I guess you mean," laughed Gus.

"Yes, that's more like it. I wouldn't trust that pig-faced villain across a ten-acre lot with a ten-cent piece!" declared Bill.

"The soul of honor doesn't dwell in a husky guy who'd strike a cripple," said Gus. "And I bet a cow he's going to stir up more trouble around here before he quits maneuvering."

Tony made no reply, but stood for a long time,

gazing at the floor. Presently only the sound of tools and machines was heard in the shop.

It is not probable that Luigi told of the precise outcome of his clash with Bill and Gus, though he may have said enough to influence sophomore sentiment against Bill's standing in the school. At any rate, the feeling grew in strength and spread until it became a subject of comment among freshmen and seniors who were inclined to sympathize with the brainy and keen-witted lame boy. At least he had many friends, both high and low, and most of the teachers admired him openly.

So far the sentiment had been rather more doubtful and erratic than determined. There had been nothing to warrant the assumption that Bill thought himself more intelligent than the sophomores, or members of his own class. His radio knowledge was somewhat a thing apart and in that he shared with the less obtrusive Gus.

And then the lightning struck, suddenly and

hard. Once each week an outsider from the engineering department of some big industrial plant, or large university, lectured to the entire student body of the Marshallton Tech in the assembly-room, and there were some of these talkers who got much pleasure out of it. Not only was it interesting to hold forth to a lot of eager, responsive boys on subjects that elicited their curiosity, as the building of great dams and bridges, the tunneling under mountains, the erection of mighty machines, but it was also diverting to hear their various comments which also led to a comparative estimate of their understanding.

Davidson, chief mechanical engineer of a great mill building corporation, was especially interested in the personal equation concerning the students, particularly after Bill Brown had asked him a lot of questions, some of which he had replied to rather lamely. Even more as a matter of getting back at this young investigator who sat with a crutch held before him and regarded these

replies with a smile than for the desire to measure minds, Davidson gathered a few catch problems that were stumpers, and upon his third visit, after talking awhile he switched off on the subject of problems, short cuts to solutions and then put a question, looking hard at Bill, as though uttering a challenge.

"Now, how would you go about it," he shot at his audience, "if you were asked to measure the cubic contents of an electric light bulb?"

A number of smiles greeted the question; these may have been from lads mostly in the advanced courses who knew the trick. The lecturer asked for hands to be raised by those who thought they could do it, and noting with satisfaction that the crippled boy was not among the number who responded, he began hearing them, one at a time.

"Measure it outside and allow for the thickness of the glass," said one fellow.

"But how about the carbon inside?" asked Davidson.

"Break the glass and measure the loop," called out a soph.

"How many of you would go at it in that way?"

A number of hands went up, some rather reluctantly, as though their owners scented a trick.

Davidson still eyed the cripple. "How would you do it?" he asked.

Bill shook his head and said, "It is that old trick of Edison's and it's dead easy. I guess a good many of our fellows know about it. You simply punch a hole in the bulb, fill it with water, pour it back and measure the water."

"Yes; that's right. It is really the only sure way," said the man, his manner showing disappointment.

"Oh, no; it isn't, begging your pardon. Oh, no, not the only way," said Bill.

"Well, now, how else——"

"Put water in a graduated glass, stick the bulb in up to the plaster seal and note the increase. Then break the glass and the carbon and put that

in separately, deducting the last amount from the first."

Davidson scratched his head. "Yes; that would do it, of course, too, but——"

"But you said the other was the only way," insisted Bill.

"Oh, well, the only quick and sure way. Of course, there are other methods."

"I'm sorry to have to disagree with you, but my method is just as sure and quicker."

"It might do—it might do! You seem to be ready with short cuts in mechanics. How would you quickly divide a board seventeen and three-eighths inches wide into five equal parts? Can anyone here do it?"

"That's easy," said Bill.

"Well, then, how about this one? If a pint cup——"

"Your question about dividing the board is too interesting to pass over so hastily," interrupted Professor Search. "If you will pardon me, I

would suggest that Brown go to the board and demonstrate it."

"Will you let Grier do it? He knows that old trick, and he is handier with the chalk than I."

Gus went forward, took a two-foot rule from his pocket and laying off two parallel lines seventeen and three-eighths inches apart, laid the rule diagonally across them so that the space would measure twenty inches. Then he ticked off at the figures four, eight, twelve and sixteen. Laying the rule straight across from an outer line to the first tick he turned and announced:

"Each space is practically three and fifteen-thirty-seconds inches."

This brought forth something like applause, along with many very audible remarks, such as: "Pretty cute." "Handy." Where'd he get it?" "Can't fool either of 'em, can you?" "Those fellows are practical, that's sure."

Mr. Davidson smiled sort of absently. He had

to give approval, but dropped the question rather abruptly, going back to his last problem.

"Now, see if you can tell me this: I have a half-pint cup even full of water, the liquid exactly level with the edge of the glass. About how many one-inch brads must I drop into the cup before the water overflows? Water, you understand—not oil, nor molasses. This is an old experiment and it concerns a well-known physical law. If anyone has seen it done he will kindly remain silent. Now, who will make a guess as to the number of nails?"

Every brow was wrinkled, except those of a few conclusion jumpers of whom there must be some in every crowd. One of these latter fellows shouted at once: "About a half dozen and it'll slop over!"

"It'll take only one or two," said another.

"Not more than a dozen, anyway."

But the others, mostly lads capable of real mental exercise, were all cudgeling their brains. It was a subject which had much to be taken into

consideration. Presently one senior spoke up:

"It ought to take more than an ounce of them."

"Nearly as much, anyway."

"More. That'll fool you mightily."

"It looks as though a few brads would do it, but it will take a lot."

"And why?" asked Mr. Davidson. "Come, what do you say about this?" He again appealed to Bill, turning then also to Gus.

"Well, sir, I think I can see that it will take nearly all of that box of brads, perhaps a hundred. It is a matter of cohesion and even water possesses that, so that to overflow, it will have to rise a good deal above the rim. The area of the glass plus the rise that will be required for the overflow will be, in solid contents, easily as much as that box of loosely filled brads; if they were melted down they wouldn't be greater than the water area. It is a good deal like the loading of a boat: the displacement is a uniform, compact mass; the load is a jumble with more air space than material. And

it is like the floating of a heavy iron pot."

For answer the lecturer turned and drew a half-pint of water in a glass, brought from his pocket a box of brads and began dropping, one at a time and counting, them into the water. There was profound silence. As the number increased, reaching above two score of the small nails, there began to be heard comments here and there.

"Zowie! Who'd a thunk it?"

"Better just dump 'em all in and start over."

"Don't reckon those nails are soaking the water up; eh?"

"If it were molasses you could fill it half full of brads before it would slop over."

"Say, look, he's up to sixty! Would you believe that?"

"Hey there, Fatty, you guessed one nail; didn't you——"

"Sixty-eight, sixty-nine, seventy; looks to me like a spill pretty soon."

"When the freshet starts——"

"It'll drown a lot of people."

Mr. Davidson stopped dropping the nails into the tumbler and held up his hand.

"There it goes, boys—the first drop over! Eighty-two brads. You can see who guessed best. The cohesion of the liquid explains it, as our young friend here has said. I'm glad you have one thinker among you. Now I want to tell you something about the installation of machinery by individual motors driven by a central generator, as compared to the drive from a mill long countershaft and pulleys." And he proceeded with his talk.

Yes, the lightning had struck. From this moment the respect shown to Bill, and to Gus also, by those who had no desire to do otherwise was really almost overdone, his classmates being generally proud of him, and the teachers and seniors pleased to have him a member of the school. But the sophs mostly grew more inclined to consider both boys a menace to their peace of mind.

CHAPTER XIII

QUICK WORK

"I MUST have to report to you the utter spoil of your shop and your work; also my own complete!" Such was the breath-taking remark of Tony Sabaste, as he stuck his head into the room of Bill and Gus and regarded the boys at their studies soon after daylight.

With no more than a word of surprise or doubt the young mechanics followed their Italian friend into the basement and were not long in finding his words true.

The crown plate of the drill had been broken in two with a hammer and probably the same means had been used to crack the lathe pulley and smash some of the tools. Materials were not harmed, but the work just begun on two new radio sets of

the better value, along with Tony's efforts, was reduced to splinters.

The door of the shop had never been locked; the miscreant had entered in the night and engaged in the work of destruction.

"Well, who——?" began Bill.

"Ah, say not that question," said Tony. "Do not you know? Is there a doubt; even one? I have no enemy in the school but one, and who else——"

"Oh, sure, anyone but friendly, innocent Bill would know. Malatesta, of course."

Gus was ready with short cuts to names as well as to problems, his genius for detection having been proved in a like instance, before this. He went over and picked up a hammer, holding it by the head and scanning the handle.

"Here, I suppose, are some thumb prints," he said; "it only remains for us to get hold of——"

Gus was interrupted by the sudden entrance of a member of the senior class, Jim Lambert, who

had but a few days before completed a crystal radio set in the shop. He gazed about him.

"About as I thought. This is rotten, fellows, and if I know anything, it is going to be paid for."

"Who will—?" began Bill.

"Let me tell you. I room right above here, as you know. Late last night, very late, probably toward morning, I was wakened by a noise. I listened and heard the sound of a blow that was surely down here. Then I heard some more noises, muffled, though,—the floor, you know, is fireproofed and thick. I didn't wake Smith, but I got up and went to the door and looked out. I hadn't been there two minutes before I was aware that someone came up out of the basement and was standing in the hall. I think he must have suspected something, for he came along toward my door and I got inside and closed it, with my hand on the knob so as not to click the latch. Then I felt a pressure on the door—the fellow

had the nerve to try it. He wanted to see if it was open, probably thinking it was left ajar and he may have seen the light from the window pulled it open then and there he was—pretty much through the door before I closed it. Well, I just surprised, I guess."

"Who, who?" from Bill.

"Why, Malatesta, of course," said Gus, with positive finality.

"Say, young fellow, you've got it. Good guesser. He must have some grudge against——"

"What said he? How explain?" demanded Tony, visibly excited, his dark eyes glittering with wrath.

"Not a word. Just grinned and turned away as cool as a glacier and mosied off. Said I: 'Well, what are you after?' But he made no reply and beat it."

"If this isn't the limit!" Bill exclaimed.

"It'll be his limit! Come on! The Doctor is

an early riser and we'll see him at once," Lambert urged.

"But we aren't going to squeal on a—" Bill's loyalty to school practices was extreme.

"Oh, yes you are in this case! This is no prank. It's a crime, and it would be another to keep it to myself. Loyalty to the school demands that we squeal. To be sure we have only circumstantial evidence——"

"No, actual," said Gus, holding up the hammer. "Let's get the man and we'll do the rest with some ink, a piece of paper and a magnifying glass."

"Glory! That's the cheese! I never thought of that," Lambert said, leading the way out of the building and to the office, discussing the case further on the way. The boys met the Doctor returning from an early morning walk, which was a habit with him, and within the office he heard Lambert's report calmly.

"We cannot call in any of the teachers, or the

janitor, as hardly anyone is up yet. We shall have to handle the case without gloves and depend on you boys. You will understand my position, so I will ask you, Lambert, to bring Malatesta here at once, saying I wish to see him. Wake him, if need be.

"But if he refuses at this hour?" asked the senior.

"But will he, if it is at my request?"

"Very likely. I know him. Rage, scare, ugly, even knife; no telling!" Tony declared.

"Then we had better wait for the janitor. Go call him."

"No, Doctor, please," urged Gus. "I'll go with Lambert and we'll fetch him here. And he won't hurt anybody."

"But can you be sure of this? We always try to avoid publicity in matters of this kind. It would be best to have Malatesta here this early, before most of the boys are up and about, but there must be no trouble."

"You may be sure there will be no trouble," Gus insisted. "Bill can tell you why. It's really quite simple."

"Well, at least call on Malatesta and tell him. I will call the janitor."

Gus and Lambert hastened away. Bill, also eager to have the Sicilian apprehended at once, and knowing Gus would put it over, sought to detain the Doctor. Tony, like-minded, aided in this. In a few minutes Lambert was knocking on Malatesta's door, Gus having gone to his own room.

There was no response at first; then, a sleepy grunt. The time was yet an hour or more before the first rising bell, so this early summons might properly be resented. But when Lambert called in a low voice: "I have a message from Doctor Field," the Italian's roommate, Johnston, a morose, dull-witted chap whose whole mind was bent on keeping up with his classes, made reply:

"Who do you want?"

"Both of you," said Lambert, which was true, for he knew he could not enter without seeing Johnston also.

At that Johnston got up, opened the door and Lambert entered, in his hand a paper which he made a pretense of consulting, as though it were a memorandum of his errand, his real purpose being to hold off until Gus appeared. Somehow the senior had faith in this quiet, smiling, precise freshman.

Then Gus came swiftly along the hall and through the room door, advancing near the bed still occupied by the Italian. Lambert, rather inclined to dodge trouble, stepped back a little. Said Gus:

"Malatesta, Doctor Field wants to see you at once. He wants no fuss, Johnston, he said, so please let on to know nothing about it. Come on!" —this to the Sicilian.

"What to see me about?" demanded the Italian, angrily. "Well, I will presently see him—go tell

him that! It is not yet the time for school. I am yet wishing to sleep a little. Good day to you."

"You get up and into your duds! This is no joke." Gus advanced a step.

"And who are you to so order of me? Get out of this room!"

"Come on, you! If you don't slide out of there in about three shakes we'll drag you out and take you up as you are."

Malatesta got out, but not in the spirit of obedience demanded of him. He tossed the bed clothes aside and, to the astonishment of all three beholders, proved to be fully dressed, excepting his coat and shoes. With his feet on the floor, he quickly reached behind him and drew forth a long-bladed clasp-knife, flinging it open with the dexterity of long practice. But Gus was quicker. In two seconds the fellow was staring into the muzzle of a revolver.

"Put it up if you don't want to look like a

sieve. Now, then, shoes. Coat. And put down that knife. That's right. Now move!"

Malatesta was not equal to any further braggadocio. Intuition goes far at such times, and there seemed to be something about this holder of the more powerful weapon that demanded respect. The fellow hardly gave a second glance at the gun, but stepped into his shoes. Without stopping to lace them, he grabbed his coat and got into it as he headed for the door. The march to the school office, single file, Luigi, Gus and Lambert in the order named, was as silent as it was hasty, Gus thrusting the pistol, a real one this time and loaded, into his pocket as they went. Nor did he need to draw it again.

"Luigi Malatesta, I am sorry to have been compelled to bring you here at this hour," said the president, "but you are suspected of——"

"Oh, I know! But me it was not! Yet I know who, though to tell I shall never do."

"How do you know? Were you present, then, when the injury was done?"

"No, not present, but I know."

"You must tell us——"

"Never!"

"Why not?"

"It is not the way of the school to blow——"

"Pardon me, please, Doctor, but we won't get anywhere this way," interposed Bill when Gus nudged him. "If I may suggest——"

The president had come to regard this boy as possessing ideas and he hesitated. Bill turned to Gus who stood with the hammer and a magnifying glass held behind him.

"Please have this man," said Bill, indicating the Italian, "make a print of his thumb—this way." Bill smeared some ink on a blotter and took up a bit of white paper. Malatesta frowned, then smirked, then laughed.

"And why not may I?" he questioned. "This will make of these villains fools!"

The animal-like snarl that the Sicilian put into this last sentence did not gain him any sympathy, but there was only confidence in his quick motions and ready compliance. He stepped to the desk, pressed his thumb on the wet ink spot, then on the white paper, fell back a few steps and glared defiantly. Gus brought forth the hammer and the expression on Malatesta's face changed somewhat.

Silence followed as the Doctor took up the hammer handle and went over it with the magnifying-glass, paused at a spot where the handle would be most commonly held and examined the surface long and carefully. He turned to the thumb-print on the paper, then back again to the handle, comparing the two impressions. Presently he glanced at Bill and then at Gus, nodding; he turned to Malatesta.

"We do not wish to let such an unfortunate circumstance as this become hurtful to the school by making it public. The janitor will be here in a

moment. He will accompany you to your room and you will obtain your property and leave at once. When you return this way I shall give you the sum paid us for your tuition. The school will make good the damage you caused. Ah, here is Royce now." The president proceeded to instruct the janitor.

Lambert, followed by Bill and Gus, returned at once to the dormitory, after a word of caution from Doctor Field, and, aside from the fact that Malatesta left before the school was fully awake, the students knew nothing.

The injury to the shop was kept as secret as possible. In a few days the work went on as before, only one other fellow besides Lambert knowing there had been a smash-up. So that incident was closed, but out of it, or as a part of it, more serious circumstances showed that Malatesta, wherever he may have gone, had by no means forgotten the feud that now included Bill and Gus as well as Tony.

Gus was never questioned as to his possession of a revolver which made his wild west method of intimidating Malatesta possible. Probably the Doctor believed the cigar case had been used again.

CHAPTER XIV

FISTICUFFS

Siebold, a keen-witted fellow and an athlete, was the leading spirit among the sophomores of Marshallton Tech. He was class president, stood easily at the head of his classes, if head there was, and in most things he admittedly surpassed his fellows. His people being well-to-do, he indulged in all the little "side kicks," as the boys termed sports, social diversions and the like.

A really fine chap was Siebold, though he possessed one unfortunate failing—he persisted in holding to a grudge; and he had never forgiven Bill and Gus for that hazing fiasco, nor for bringing down the scorn of the school on what had been considered a harmless kind of fun.

Of course, the school had a debating society, of

which the membership was from all classes. Bill joined it; Gus did not, and it was the only thing in which they acted separately, with the exception of the gymnasium. Bill was sorry he had joined the society, for upon being chosen one of the three speakers on one side of a subject so decidedly in their favor that the question should never have been selected as offering a negative, Bill had so completely overcome the opposition led by Siebold, who especially prided himself as a debater, that his opponent and his mates were held up to much ridicule. Whereupon the breach widened, and Siebold took many occasions to show a paltry spite against Bill and even toward Gus because he was Bill's chum.

In the gym, Siebold also shone as a good boxer, fencer and wrestler. This rarely brought him into contact with Gus who, during his short exercise, avoided others. Tony, however, was willing to become a victim. The young Italian liked to put on the gloves, as he was quick, strong and

good-natured; but the instructor had, for some reason known only to himself, passed him by.

Late one afternoon Gus stopped pulling weights to watch Siebold box with a big soph who was a mark for quick, scientific work and whose heavy punches and swings often fell short of their aim. Tony also was an interested spectator and came forward with the request that Siebold show him some of the points he had mastered. Whereupon Siebold had the Italian lad put on the gloves with Sadler and the big fellow promptly hit Tony and knocked him off his feet.

The Italian's dark eyes flashed fire, but he smiled and came back. The instructor refused to let the bout continue, saying that Tony must gain more experience. Gus called Tony over.

"I don't want to butt in," he said, "but I didn't like that. You could learn that game. Would you mind if——" he hesitated modestly.

"Could you show me? Everything you do so verra good."

Tony was so eager that Gus consented. They agreed to come to the gym at a time when no one, not even the instructor was there. Then, in addition, Tony bought a set of gloves so that the two could practice in the shop now and then. A month went by. Cold weather came; then the Christmas holidays. Bill and Gus went home for the one big day, and came back to study and to continue their shop work; but Tony was away for ten days, during which he took a few lessons from one of the best teachers of the fistic art that could be found.

"He said I am now there," gleefully announced Tony when the three got together again; "and that I can learn one poco, for I did puncha him times several and he no hit me sempra. I think you," his dark eyes appraised Gus, "are quite—no, I not throw bouquets—are gooda as he."

"Oh, not so good as Ben Duffy? I know all about him. I went once with my city uncle to see him fight. He's a crackerjack, sure."

"But he not poka me more as you do," argued Tony.

"Well, I've been studying your defense longer —it's mine too, you know. That's the reason." The generous Gus smiled. "Anyway, let's go to the gym to-morrow. I want to see how you mix it up now with Sadler."

Tony did "mix it up" much to Sadler's discomfort. Siebold stepped up:

"Say, Italy, where did you get it" And Tony, proud, ever eager to give credit to a friend, nodded toward Gus.

"To him I do owe it. He one granda master with the feest."

"So? Expert electrician, mechanic, sport spoiler and bruiser, eh? Some combination." And Siebold turned away with something too much like a sneer on his fine face. Gus was hurt, but smiled, as usual. Tony resented the slur.

"For all which," he said, "the cervel—the brain, is required, eh? Maybe, Soph, if you brain

ancora had you could beata heem—but no so now."

"No? I'll bet a sardine that you could put it all over him," Siebold said, desiring to mollify an upper classman. Tony laughed.

"No; not coulda you ancora, nor any other one in this school."

Siebold turned away, as he added: "You won't have a chance to prove that. I pick my company. But you will get another go at Sadler after I give him some more pointers." It was evident that the leader among the sophomores was something of a snob. A little later his prediction came true regarding Sadler and Tony.

Gus was again a witness to the bout. It had become noised around and the gym held a goodly crowd of students. At such times the instructor, thought interested and often a witness, dodged participation because of the slugging tendency and its possible effect on the school if he encouraged such a thing.

Tony went into the game with a smile. Sadler, though generally good-natured, was serious and determined from the start. He got a number of stinging cracks on his ribs and in the stomach, Tony hardly being able to reach his head. Beaten again at points, landed on five times as often as he landed, he began to resort to a waiting game, for there was no doubt he could stand punishment. Stand it he did until Tony got enough confidence for infighting, though he should never have attempted to swap punches with such a big fellow.

Suddenly Sadler caught the smaller man starting a short arm upper cut for the jaw and he took it open, delivering at the same instant a hook that no man when giving a blow could hope to block. He caught Tony coming in and that lent additional momentum to the blow which got Tony on the side of the neck, over the artery, and it was as clean a knock-out as could be given. They carried the Italian to a wrestling mat, fanned and bathed his

face, and when he came to and sat up, Siebold was there with his ready tongue.

"He's too heavy for you. No fellow could hope to stand up to Sadler at his own game. I told you so."

Gus saw Tony's real hurt and was incensed. "Oh, don't you believe that," he said to Tony. "Another time——"

"Huh, fellow! Maybe you think you could stand up to Sadler. I'd like to see you, or anyone here, even the instructor." He glanced around. "Could they, Mr. Gay?"

"Well, perhaps not. Sadler has the punch and you can't hurt him," said the instructor, coming up. "Feel all right now, Sabaste?"

Nothing more was said about another bout, but the subject stirred the crowd so that it could not die out entirely. Three or four days later the instructor and Siebold entered the gym together, and stopped to watch Gus punching the bag. Sie-

bold had never seen anything quite so snappy as that. Mr. Gay made some remarks.

"That fellow must have had some instructions under a strong teacher—there's good material there! Say, look at the way he plays a tattoo and swings, too, and gets away from it. Foot work, my boy—foot work! You're good, Siebold, but we haven't anything like that in the school. I had no idea of it."

"Shucks! All the same I'd like to see him swap cracks with Sadler," said Siebold doggedly. Just at that instant Sadler came lumbering in with a dozen other fellows at his heels.

"Better not start anything rough," cautioned Mr. Gay.

But Siebold paid no heed. He walked over to Gus and addressed him roughly:

"Say, would you have the nerve to fight Sadler?"

"Fight? Fight? Why, man, I have no reason to. I haven't anything against him." Gus was

indignant. "And as to boxing bouts, I'm not in this game. Too busy!"

"Shucks! One way to whitewash a little streak of yellow." This with a sneer.

Suddenly the kindly smile on Gus's manly face faded out. He stepped quickly in front of Siebold.

"You can't say that to me! I'll fight you here and now; bare knuckles if you like."

Mr. Gay overheard the conversation and came back to the boys.

"None of that here," he said. "If you want to have a friendly bout with the gloves, all right—even to a finish—but no bad blood."

Gus turned away. So did Siebold. Sadler, who was tired of being punched at Siebold's request, would prefer to do a little looking on. With satisfaction he saw Mr. Gay take his hat and leave the building. The instructor may have seen a scrap on the way and wished to evade responsibility. He was anxious to be popular with the boys.

Sadler offered a few suggestions. Immediately several boys surrounded good-natured Gus and shoved him into the open center of the room. Then they did the same to Siebold, but with more verbal persuasiveness and in a moment the two were facing each other, and a pair of boxing-gloves was handed to each.

CHAPTER XV

LOYALTY

THE freshman's smile had returned, and he stood with the gloves swinging by the strings from his hand. Siebold, who really was no piker, was slipping on his gloves and having them laced up. Gus wished Bill to talk for him—and Tony too—not that he needed moral support, but it was pleasanter to have good friends along than to be entirely surrounded by opponents. However, he felt quite equal to the physical task, and as ready to stand his ground morally.

"See here, you sophs," he said. "I'll box and gladly, but not in the way Siebold wants to."

"Aw, what do you care how the other fellow feels? It's a bout just the same; isn't it?"

"But Mr. Gay doesn't want us to show any hard feelings," Gus urged, "and he's decent to us. I

don't believe Siebold really thinks I'm yellow—*do* you?''—this last to his intended opponent.

''Looks like it,'' growled Siebold, showing more indignation than he really felt. Had he permitted himself to use his reason, he would only have admired Gus and would not have quarreled with him. Probably it was nothing more than an uneasy conscience that now asserted itself and made him add, in self-defense: ''I guess you're yellow enough.''

Gus had but one reply to make to that—and his answer was not verbal. He did not again take his eyes from Siebold, but he pulled on the gloves, laced the right one with the clumsy stuffed thumb and his teeth. Then he stepped forward. Siebold made a feint of extending his hand for the customary shake; but Gus ignored it and the next moment the two were at it in a way that showed clearly the desire to hurt each other and to disregard the mere matter of points. It was a slugging match from the first.

Siebold was no mean antagonist, and he had some tricks worthy of the prize ring. Moreover, he was a little taller, a little heavier and had a longer reach than Grier. Immediately it became apparent that he was trying for a knock-out—he meant to put Gus away and to do it as quickly as possible.

But Gus did not mean to be put out, and it became as quickly evident that he was quite capable of making Siebold work hard even to hit him. Siebold would bore in, drive for the jaw or stomach, and either miss or land lightly; but he would nearly always get a stinging crack in return—delivered at the same instant that his own blow was blocked, or in the fraction of a second after he had only struck the empty air. Still, these blows of Gus's were not paralyzers—they were just weakeners. They made Siebold angry enough to spend his strength in getting back at the chap who could land in just when and where he wished.

Siebold's nose ached and bled; his eyes smarted,

and one was closing. His stomach, too, was sore, and somehow he could not help but feel that his blows were growing futile. At the end of the fifth round, as he sat back on a bench, letting some of his would-be handlers fan and sponge him, he looked across at Gus, standing there, refusing all half-hearted offers of attention and gazing at him with a smile on his unmarked face, the sophomore champion began to wish he had not got into this fuss. Then he grew furious at the thought that he was not making good.

A few minutes later, near the end of the sixth round, he began to try for clinches in order to save himself, but somehow his wary opponent, as quick on his feet and as strong with his hands as he was at the start, was still adept at hitting and getting away. Just then Sadler, who, with watch in hand, always made a little step forward as he called the end of each round, put out his foot when Siebold was facing him and the sophomore, tired and eager for a minute's respite, started to get back

and lowered his guard. And upon the instant of shouting the word Gus, with his back to Sadler, let go with his right.

Siebold crumpled up like a rag. Sadler, slow to begin counting, stood over him a moment. Gus drew back and with the first excitement he had shown jerked his gloves off and tossed them wide. The boys crowded in, gazing at Siebold who lay with white face and sprawled out like one dead. Gus heard Sadler's count reach eight; then stop. Someone said: "What's the matter with him, boys?" They had not seen a fellow lie so still and show not even the flicker of an eyelid. One boy stooped down and lifted Siebold's arm, calling to him: "Wake up! Are you hurt?" A doctor's son got down and put his ear to Siebold's heart. "Gosh, fellows! It's stopped! He's—he's dead!"

Gus pushed the boys aside. He had hit Siebold over the heart harder than he had intended. What if the blow had proved fatal? Most unlikely; more

than once he himself had been struck that way. It had hurt him, and once it brought him to his knees, but it had never made him unconscious. He, in turn, got down and put his ear to Siebold's side. In the excitement both the doctor's son and Gus had listened at the right side and no one had observed the mistake. They were all looking on with horrified faces. Gus could hear nothing; he touched the prostrate youth's cheek; it was cold. He rose with something like a sob.

"Fellows, I didn't mean to do it. I didn't know he couldn't stand it. But he can't really be much hurt, can he? Why, I—he——"

Again Gus knelt and listened for heart beats. He slumped down, feeling as though his own heart would stop, too. In his daze he heard someone talking on the telephone at the far end of the gym and dimly distinguished the word "doctor." He got to his feet then. No one opposed him. He must get Bill, good old Bill, to speak for him and tell them that he had not meant to hurt Siebold.

They must know he was not murderously inclined, and that he hated to hurt anyone, anything, an animal, a bug even; also that he would not run away if they wanted to arrest him.

In a sort of trance he reached his room, where he found Bill and Tony. Gus fell into a chair, almost sobbing.

"Bill, old fellow,—we boxed,—Siebold! And I —I've—I guess I've killed him! I didn't mean to, Bill, you know that. Tell them I didn't; that I'll be here and go to prison without a word. And write home, Bill, and tell them——"

"Oh, stuff!" said Bill. "I don't believe it! Tony will go see about it. At the gym, Gus? Yes, at the gym," nodding to the Italian.

Tony was gone. Bill stood by Gus, his hand on his chum's head. Seldom was there any real show at tenderness between these lads, but there was a loyalty there that made such a demonstration unnecessary.

"It isn't so, Gus—and even if it should be—

anybody knows it was an accident, and you won't be arrested. At least not in a criminal way—only in the matter of form. The president will understand. And, Gus, we can get together money enough to defend you—legally—even though we have to quit school."

"*You* sha'n't quit school!" said Gus. "Not if I have to do time! No, sir! It doesn't matter much about me, but you—you're not to be in this at all, except I don't want us ever to be not chums, Bill."

Rapid footsteps were coming along the hall then; the door opened and Tony and Sadler burst into the room.

"He's all right, Grier. He's come to."

"Yes, *mio amico;* Siebold, this Sadler say, is again recover. You no need longer to fear. But, ah! They tell it to me that he a sight presents. He will go to his classes the observed. And it serves him all the right; is it not so? And the most to do is to explain the Doctor for you—which we all do."

CHAPTER XVI

ONE WINTER SATURDAY

MARSHALLTON is a village with nothing more than two general stores sufficient to cater to the needs of the near neighborhood and the Tech students. Guilford, nine miles away, is the railroad town and, now and then, for extra supplies the Tech boys may spend a dull half hour each way on the trolley to visit the quiet place which holds no other attraction than the stores.

Bill, Gus and Tony, eager to get some radio supplies that might as well have been ordered from the city, obtained leave to run over to Guilford and back. To show his appreciation of their friendship, Tony decided to treat Bill and Gus to a taxi ride; so he 'phoned to the town for one. It came and the three piled in, much elated over

the prospect of a pleasant shopping trip, though the weather was a little stormy.

The purchasing took all that was left of the morning. The boys gathered their things into bundles and, at Tony's command, made straightway for a restaurant. Being a senior, he claimed entire charge of these freshmen.

"You not respon—no; it is that you are irresponsible," he said as he demanded the privilege of paying all expenses. "We will get," he laughed, "some sphagetti and I show you to eat. You like eet?"

They did. The clean tables and pleasant interior were attractive. The boys stamped the newly fallen snow from their feet, and opened their coats to the genial warmth. Then they turned to meet the waiter and glanced up with something of a shock. Luigi Malatesta stood before them and addressed them collectively:

"I am proprietor of this. We serve only gentlemen. You will go to—to—to—elsewhere."

Gus leaped up, forgetting the fright after his last fisticuffs. He wanted to punch this villain again.

"Listen, you confounded nuisance! This is a public place and we demand—" He got no further, for Tony's hand was on his arm.

"Attendate, *mio amico*—wait! Would you eat eats in a such place? We might all getta the poison here. Mucho better we go of our selves."

Malatesta beat a hasty retreat. The lads went out and along the street to another place equally attractive and there they ate unsparingly, the while discussing their latest experience, though Tony was silent on that. Finally Bill and Gus fell into his mood. They came out of the restaurant after an hour, to find that the storm had increased, a stiff, knife-edged wind driving the snow horizontally and making drifts. The taxi driver at the garage looked dubious, but agreed to try for Marshallton. The worst that could happen would be a night spent at some farmhouse.

The storm increased rapidly, the snow turning partly to sleet piled up in long windrows across all half-sheltered places, leaving open spots bare, so that the road resembled the storm waves of a white and foaming ocean. The car skidded along on icy ground one minute, and the next its wheels were buried in caked drifts.

The boys were peering out, watching the strange effects of the storm, but noting with greater concern the slowing up of the taxi. Then they stopped.

"Reckon we can't make it," said the jolly, round-faced taxi driver. They could not stay there in the road. It was imperative that they should find a shelter somewhere. Not half a mile ahead there was a farmhouse in which they might all be made welcome and comfortable.

Again the man had proved to be correct. The boys agreed that forecasting the weather and the social geography of that region were in his line. He tried to run on again, but the starter refused

to boost the engine and the battery nearly gave out. Bill insisted that they crank up and not exhaust the battery, else they would come to a dead stop. Gus and Tony lent a hand in turning the engine over and soon they were again bucking the drifts, stalling the engine two or three times within the next three hundred yards. A drift faced them that was altogether beyond hope, and before they drove into it, Bill insisted that they back over the thinner snow to the side of the road so that they would not be hit by another car if one should pull through such roads.

"Now then, you fellows!" said Bill, as usual assuming command where anything important was at stake. "Go on to the farmhouse and bunk, if they'll have you. I'll wrap up in these robes and be as warm as toast here in the car." It was an enclosed tonneau, the window sashes fitted tightly and two big robes promised a little comfort.

"Yes, *you will,*" said Gus sarcastically.

"*Not!*" declared Tony. "We can easy carry you. You say it—pig-on-back?"

The taxi driver joined in and helped the two boys in this, also.

"Did you say there's a farmhouse just on ahead, Mr.——?" asked Gus.

"Merritt is my name," answered the driver.

"And a roadside is your station. You're fast in the snow and you cannot go and you're mad at all creation," said Bill.

"You're right, son, about bein' stuck, but I ain't mad. Reckon I stand to lose on this trip, but——"

"No, my friend; you will not lose one cent," exclaimed Tony. "More, you shall make well. We are not the unappreciatives, ever. Show us this farmer estate and entitle us to be his guests and you shall want for nothing—eh, my friends Bill and Gus?"

"You've said it, Tony, and you are the cheese."

"Ah, no; I am but the macaroni. Do you think this farmer will cook the spaghetti?"

"Not likely, but Farrell sits down to a good table, I reckon," Merritt ventured. "Well, young fellers, let's mosey on. It'll be stiff goin', though 'tain't more'n a quarter of a mile now."

It was stiff going. Bill managed to get through the thin places and they helped him through fast increasing drifts, Gus at last getting him on his back for a "gain," as he expressed it, of fifty yards. Then Tony took a turn for a like distance, and Gus and Mr. Merritt crossed hands to "carry a lady to London"; so they would have got Bill along for a considerable distance had they not come opposite the end of a lane, with the dim outline of a house standing back.

Up the lane they went, hearing the muffled barking of a dog. The side door of the house opened, a big farmer with a huge voice greeted them cheerily. He was in his shirt sleeves, which argued for comfort inside the dwelling, and there was an air of comfort in the broad hallway that was gratifying. The three were received like young

princes and ushered into a large sitting-room. From their chairs before a big stove, a pleasant woman and two young girls rose to welcome the wayfarers.

Merritt they knew by name, and he began an apologetic effort to account for their coming, but Bill took the matter in hand.

"Mr. Farrell, aren't you? And I suppose this is Mrs. Farrell. My name is Brown and these are my friends, Mr. Sabaste and Mr. Grier; we are all students at Marshallton. Went in to Guilford to the stores and couldn't make it going back, though Mr. Merritt put up a good fight with his little car. And now we are going to ask you if you can keep us for the night,—table and spare room? Anything that is handy, for we don't want to give you trouble and we'll pay——"

"Ah, the best. As if you are one fine hotel, because no such could give to us more of comfort." This from Tony, who was always most liberal and eager to please. So saying, he pulled out ten

one-dollar bills and gallantly tendered it to the lady, with a nod and smile at the farmer.

"That's right. The wife has all the trouble. You boys are welcome; eh, Sarah?"

"But John, this is too much. I could not accept such a large amount for so little."

"Mother," said one of the girls, coming forward, "you should not accept anything at all."

"Well, now, Mary, I guess you're right. This is our daughter, young gentlemen, and she always has her way."

"But she has not consider the way to justice," said Tony, his black eyes flashing conviction. "We give that, or we not remain; even it is too little."

"Yes, considering the storm, our predicament and our coming in on you this way, unasked, we can't consent to less," Bill added.

"Mabel, come here, girl," said the housewife, laughing. "This is my niece. She's making her home with us. Now, all you young folks and Mr.

Merritt enjoy yourselves while I get supper and father does the barn work."

The boys never forgot that long, yet all too short winter evening; the wholesome food; the dish of home-made candy; the fireside game of "twenty questions"; the music played by Mabel on the old-fashioned square piano, while Mary and Tony danced; the lively conversation and Bill's exhibition of so-called mind reading—really muscle reading, during which, with Mrs. Farrell and Mabel holding his wrists, he found, blindfolded, a hidden pocket knife.

Merritt had slipped out early to open the radiator of his car, which he had foolishly forgotten to do. He had come back and called Bill aside for a moment.

"There's another car down the road, just beyond mine; a big one and nobody about. I went along apiece to look at it and I think I know who it belongs to—that there new Eyetalian hash-house feller in Guilford. Only one car there like

it and that's his'n. You was askin' about him bein' in Guilford."

"Yes. We know him and he knows us. He could have found out you were taking us home and then have seen your car here and waited."

"You mean follered you? What'd he want to do——?"

"Is he still in his car?" interrupted Bill.

"I reckon so; think I saw four fellers in it. They can keep warm there and every now and then run their engine a bit to keep her from freezin' up."

"They'll be drifted in, won't they?"

"Reckon not, with a big car like that; and the storm's goin' to quit."

"But that won't let us go on to-night. And what is that Italian up to?" Bill dismissed the subject with Merritt, but resolved to tell Gus, though not Tony, as it would put a damper on their friend's peace of mind. What harm could come of Malatesta's being here? He could not

approach the house without alarming the Farrell dog and that was assurance enough. And Bill could not help being doubtful as to the Sicilian's being really dangerous. There might be such a thing as carrying this grudge business to extremes, but hardly here and in this storm.

Bill and Gus spent the night in the best spare room, under the heavy covers of an immense four-poster. They slept through the cold night like inanimate objects. Tony, alone, occupied a room which had evidently been that of an only son who had gone away to the Great War to remain away forever. There was crape hanging over the frame of a picture showing a sturdy, manly looking fellow in khaki. From the appearance of things, Tony, also, should have passed a comfortable night. Merritt was tucked away to his entire satisfaction.

CHAPTER XVII

KIDNAPED

In the morning Bill and Gus were up at daylight, as was their habit. The storm had ceased, and it was turning warm, the snow melting already. The boys went to the barn to help with the milking; they got in some wood and performed other chores. Mr. Farrell, coming in, declared with his hearty laugh that they could stay as long as they might wish to, for they had certainly more than earned their food and lodging. As they went in to the breakfast table he said.

"Mother, better give that other young fellow his money back. Where is he, anyway? Not down yet?"

"Not yet," said Mrs. Farrell, "though I called him twice."

"I'll get him up and down," said Gus, going toward the stairway.

"Father, have you seen Gyp?" asked Mary Farrell. "I've called him too, but he doesn't come for his breakfast."

The farmer shook his head and, stepping to the back door, whistled sharply and at length. Turning to come in he heard a low whine and a quick search found the dog, lying on his side and unable to rise, his eyes dull and bloodshot, his tongue protruding. Mr. Farrell had seen something of the sort before. He picked up the poor little beast and carried him to a warm bed by the kitchen stove.

"Sarah, he's been poisoned! Nothing else. Getting over it, though. What—?" And then they heard Gus calling from above.

"Bill! Bill! Come up here, quick! Tony's gone!"

It was true and the manner of his going was very apparent. The room had been entered from

without, noiselessly and by experts. Taking advantage not only of the lad's sleeping soundly, the housebreakers had used some anæsthetic, for a wad of cotton that smelled like a drug store lay on the carpet. Tony had evidently been roughly dressed. His collar, necktie and cap lay on the bureau and his stockings on the floor. That he had been carried out of the window and to the ground was certain. The two ends of the ladder had left their imprint in the snow in the sill and on the ground. The ladder itself had been thrown among the bushes.

Kidnaped! There was no question about that; but how could such a thing have happened? A sturdy boy, able to put up a fight, and the thing done so silently as not to waken a soul in the house. Healthy, sound sleepers, depending on a dog—and that poor beast put down and out. Poor Tony! What would they do with him!

Bill and Gus hastily related their affair with the ugly Sicilian and that of which Tony had told

them. They at once found that the big car had turned about and gone. Footprints in the snow proved that the occupants of the car had been the kidnapers.

The farmer and his family were duly excited over the case. Nothing so dramatic had ever before happened to them. Merritt was also wrought up to a pretty high pitch, for Tony had hired him very generously. The young Italian had shown himself to be a courteous, well-bred gentleman and had commanded respect. The manner of his disappearance, and the possible tragedy lurking behind it had earned the sympathy of them all.

But the Farrells deferred everything to Bill and Gus who were both eager to act, and to investigate the too evident, yet mysterious crime, though they were rendered helpless by the snow-piled roads.

"We'll have to use your 'phone, Mr. Farrell," said Bill. "We will pay all the tolls. We've got to make this thing known and put Tony's people

wise. His father's a wealthy Italian banker in the city, and he'll begin to move things when he hears about this." He turned to Gus: "If we could only get to the school and get a whack at the transmitter, couldn't we make things hum?"

"Why, my lads," said Mr. Farrell, "that is just the thing to do and I can get you there in a hurry. These automobiles have got it all over our horses for speed, but not for power. My bays will land you at the school in short order and through the biggest snow that you ever saw. Wait till I hitch them up to the Dearborn."

He was as good as his word. After promising to keep the Farrells and Merritt posted as to the progress of the hunt for Tony and its outcome, they were on the road behind a pair of splendid, steaming, plunging horses, and soon back at the Tech. The Doctor, about to depart for church, was startled by the news, and he at once turned the transmitting station over to the boys, going himself to the 'phone and keeping it busy. Mr.

Farrell remained a short time. Then wishing the boys success, he departed.

The county detective, the mounted police force, the city force and a private detective agency were all informed of the circumstance, with a full description of Luigi Malatesta. The incident became a "nine-days' wonder" in the newspapers. Soon it was learned that the Sicilian had, on the very day before Tony's disappearance, sold his restaurant in Guilford for a song. He had disappeared with several others, questionable characters with whom he had been associated, and on whom he had evidently relied to do the kidnaping. It was discovered also, through the confession of a Sicilian suspect, that Tony had been shadowed for weeks as he went about the school.

But all knowledge of the boy's whereabouts was totally lacking. Clues were run down without success. The search had failed. Mr. Sabaste, with a famous detective, came to the school and talked with Bill and Gus. He went with them to see

the Farrells, where he investigated every detail. The search went far and wide, with no trace of Tony.

The banker offered five thousand dollars for information that would insure his son's return, and smaller sums for any positive data, which might lead to the arrest of the kidnapers. Tony's mother was dead. An older brother who had been in business in the far west was once a victim of the Malatesta clan. In spite of every possible effort, the disappearance of the boy remained a mystery; nor could any of the Malatesta relatives, known by various names and suspected as accomplices, be found.

Bill and Gus were now in possession of one of the finest radio receiving sets that could be made, and several other students had purchased similar, or less perfect, sets from the boys. Whenever opportunity permitted they either had the loud speaker on, or sat with the 'phones clamped to their ears, listening in and having much amuse-

ment with the various broadcasters, public and private. It was a liberal education to hear a tenth of what was going on, besides the regular concert program each evening. But most in their thoughts was the hope, often expressed between them, of hearing something that might in some way reflect on the kidnaping mystery, for the boys missed their kind and courteous Italian friend.

CHAPTER XVIII

DIPLOMACY THAT FAILED

"Gus, I can't get it out of my head," said Bill one day, "that we're not, as they say in diplomatic language, entirely *persona grata* here. At least, not as we should want to be if we have the proper loyalty to the school. We have our friends, of course, among seniors, freshmen and even some of the sophs, but the sophs generally have very little use for us. Even some of our own class, in the sports, have a big leaning toward Siebold and his bunch, and they like to go along with the shouters."

"Well, I guess they'll have to go along, then," remarked Gus indifferently.

"But Gus, it's a reflection on us. We ought to be in as good fellowship as anybody. Now that we've made out so well in our radio work

and are not nearly so busy, with the rest of the term all lectures and exams, you know, we might gee in a little with the social end of it. And sports, too, Gus. I can't do anything but look on and shout, but you——"

Bill's remarks were inspired by a glimpse across the greensward at a bunch of fellows on the ball field, evidently at town ball and practice. With the coming of spring and warm weather the Tech ball team had been newly organized and put at practice. The next month would see them crossing bats with Guilford Academy, Springdale School and other nearby institutions. There was great rivalry between the home team and Guilford Academy, which had a strong team, and was much the better of the two, except that the Tech School had acquired, through Siebold's efforts, a very good outside pitcher who kept the Academy lads guessing much of the time. The winning of games, therefore, during the preceding season had been pretty even, Guilford leading by one.

And then, at the behest of older and more judicial heads, representatives of the League of Schools had met and decided that each team must play only with members of its student body, hiring no semi-professional pitchers, or even coachers, thus making the contests entirely fair.

A result of this was that in the games of this season Guilford, with a pitcher from among its fellows who had previously given his services to other teams as well, simply ran away with Marshallton Tech, winning one game by the score of fifteen to two and the other was a shut-out.

"Gus, I've bought a ball and I've got Sam Kerry, who says he used to catch for his home team somewhere in the west, to agree to keep his mouth shut and pass a few with you, off somewhere where nobody will see."

"Righto, old Bill! Anything you say—but what's the idea?"

"Well, Gus, I don't like Guilford's swamping this team in the way it has, and I propose to try

to stop it." Bill's lips were compressed and he had that look in his eyes that meant determination.

"But Siebold—" began Gus.

"Doesn't entirely run this school, nor its ball team, even if he is captain and general high muck-a-muck," declared Bill.

It was with extreme satisfaction that Bill sat on a log at one side of a path in the woods and watched little Kerry, who proved to be no mean hand at stopping all kinds of balls, nearly knocked off his feet by the machine-gun-like pitches of "that other fellow from Freeport," as Gus was sometimes called.

One early afternoon the gym instructor also sat by Bill and watched the performance. Mr. Gay had promised secrecy, but not to refrain from comment.

"I'll say he has not only got command of his ball and three good styles, but he also knows some tricks that ought to worry any man at the bat. Throw that waiting ball again, Grier!" the in-

structor called. "I want to watch that—oh, fine! It looks like a hard one and a fellow will strike over it nine times out of ten. Well, I've got this to say: If we expect to win any games we've got to have a fellow like Grier in the box, but Siebold will stick to Maxwell who is about a fifth rater—at his best."

"But has Siebold all the say?" Bill queried.

"A good deal of it. You see his father backs up the boy in everything, and he has put the club on its feet financially, in a bigger way than even the Guilford team. Moreover, the elder Siebold's money built our grandstand, the dressing-rooms and hired our pitchers for quite a while. So young Siebold can afford to play politics and insure a following, which nobody, even the professors, can stop. And the faculty and the Doctor don't bother over the matter. That chap is going to be a state senator, or a Congressman some day, I have no doubt."

"It won't work, though, Mr. Gay," declared

Bill, "because it isn't justice. Others besides Siebold are interested in and loyal to the school. We want to see our team win, don't we?"

"Yes, of course. I'm going to shoot that at Siebold and, if you'll let me, I'm going to hint that we have a pitcher among us who outranks his choice in all the high points."

It was on the next afternoon, which was rainy, that Bill found the library pretty full of readers and among them were six or seven of the ball team. He took a seat beside Dixon and directly across the table from Siebold and Sadler. He turned to Dixon:

"When is the next ball game?" he asked.

"We play Springdale next Saturday, but they're easy. The last game with Guilford is Saturday week."

"It's too bad that we get licked so unmercifully when there's no need for it," Bill remarked.

"No need for it? No, there's no need for it, but——"

"I suppose we have needed it to put some sense into us, but no longer. It would be pretty easy to clean that bunch if we went at it right."

"How easy?" asked Dixon.

"Why, you know without asking that. Putting a good man in the box and another behind the bat, of course."

"Where'd you get your good man?"

"Here in the school."

"Who?"

"I guess you'll have to keep your eyes open. Anybody ought to——"

"Listen to this, Siebold." Dixon leaned over the table. "Brown says we've got pitching material——"

"Well, what of it? Don't I know it?"

"It's a blamed sure bet he doesn't know it, or if he does he ought to be jailed for conspiracy to beat the school team," laughed Bill, still addressing Dixon.

"How's that, Brown? What's your dope?"

ventured Sadler, who alone really dared to question Siebold's authority. Bill went on, in forcible language, for he was aware that Siebold was listening, and repeated what he had said to Mr. Gay and to Dixon. The argument about every one in the school being interested in the success of the ball team seemed to strike home, and several boys gathering round began to make comments favorable to the sentiment. The librarian came over and objected to the talking.

"Let's go down to the gym and talk this thing over," said Sadler. "Brown will spring this man on us if we'll try him—eh, Brown?"

"Why, sure," said Bill, rising.

"Come on, Siebold."

"Too busy reading. Nothing to it, anyway." Siebold didn't even look up from his book.

"Is that so?" Sadler was angry. It was evident that he was willing to oppose the captain. Bill thought he saw an opportunity right here.

"He has only one vote," he said, "and I understand that all of us who care to may have a say. I know several fellows who——"

Bill got no further. Siebold began to see that it might be best to permit no defection from his ranks and no outside interference. He followed the others out and across the campus, no word being said all the way by the several boys who, in part, made up the executive committee on baseball. They filed into the gym and got Mr. Gay into their conference.

"Now, then, Brown, what have you got under your skin?" said Siebold testily.

"You heard me in the library," said Bill.

"Balderdash! There isn't a fellow in the school who can pitch like Maxwell."

"Oh, yes, there is, Siebold," said Mr. Gay. "There's no one who can play first base like Maxwell and your first baseman says he has a glass arm and is done. We have a pitcher who can pitch."

"That's the cheese!" said Maxwell. "I've told Siebold all along he ought to replace me."

"Who is this wonderful guy?" asked Siebold.

"I'll bet it's that other fellow from Freeport," put in one of the captain's staunch supporters.

"Call it off in that case," Siebold demanded.

"No, we won't call it off. We'll try him at practice," said Sadler.

"Who's captain of this team? We'll play in our present positions, all of us, or we won't play at all."

"That's right," echoed two or three followers. Bill laughed.

"Will you accept a challenge to play a school scrub team?"

"No, nor that. Waste of time——"

"That's nothing but silly stubbornness," said Sadler, with rising wrath. "Wouldn't it be just like practice? You're a fat-headed——"

"Oh, now, see here, Siebold," interposed the instructor. "You can't refuse that. It will only

bring out the best players and strengthen the team."

"Well, then, if Mr. Gay says so," Siebold agreed, "we'll play you and we can shut out any bunch you can get together."

CHAPTER XIX

A SHUT-OUT

BILL turned to Sadler. "You're with us?"

"Sure, Siebold has a substitute for right field."

"I'm with you, too," said Dixon. "Put Longy in my place, Cap."

Siebold grew angry. "You fellows have been kickers all along, and now you think that will weaken us. Well, if Ritter can't take a fly better than you can, you big stiff, I'll assassinate him; and Long is as good a short stop as you are, Dixon."

"We have four other substitutes and I'll promise three of them for our scrub team, Brown," Sadler declared.

"All right; that's seven fellows and we can pick up two more, surely. Let's hunt them up right now," demanded Bill.

They did. As it was clearing, they went to the diamond and after a little practice all round at town ball, Bill watching closely, they got into the places best suited to each player and then elected Bill manager and Sadler captain. The big fellow and Dixon had discarded their suits for plain shirt and trousers, and a small collection was taken up for pants and some extra gloves. Mr. Gay gave them a catcher's mask and some bats.

The next afternoon, the challenge having been formally given, the match between the regulars and scrubs took place, Siebold winning the toss and taking the bases. Mr. Gay acted as umpire.

Maxwell seemed to be in better form than usual. Perhaps because he found a "ragged lot of players," as Bill put it. The scrubs had not fully got together and they went out, two on strikes, and Sadler's fly was caught. The regulars went to bat, laughing, Siebold straddling the plate.

Gus stood in the box, smiling. He nodded to little Kerry behind the bat and Kerry inclined his

head to the left. Sadler and Dixon were watching closely. Could the new pitcher on whom Brown appeared to stake so much really do anything? If he could send them over the way he boxed, thought Sadler, "good night"! Brown was all the time springing something worth while. That was just why he and Dixon had been willing to make a final kick at Siebold's arbitrary rulings. And now here was Siebold himself, one of the surest batters in the team, facing the unknown quantity.

Gus put on no gimcracks nor did he make fancy swings. He merely made a step forward, raised his arm to throw and held it about two seconds —then there came across the plate something more like a streak than a ball—so it seemed to Siebold—and little Kerry, who had been squatting, nearly went over backward with the loud plop in his glove. Siebold stood, dazed.

"One strike!" called the umpire.

The ball went back to Gus who took it out of

the air as if he were plucking at a snowflake. Again the step forward, the raised arm and the ball came along swiftly at first, then slower, much slower, but keeping up. Siebold's heart sang. He would take this thing on the end of his bat and lift it beyond any hopes of a fielder's reaching it—it meant a two-bagger sure. He struck; there was no contact of bat and ball; a fraction of a second later the sound of the ball in Kerry's glove told him he had "missed it by a mile," as Sadler bawled it out.

"Two strikes!"

Siebold looked mad now. He was being tricked —that was certain. He would show this fellow if he could do that again! The ball came along swiftly, but too high. It was "one ball," and he waited. The next was fairly swift, but it was going to bounce before it struck, yet it lifted and passed right over the plate almost a foot high and Siebold wondered why he had not swiped at it.

"Striker out!" called the umpire, and the cap-

tain of the regulars angrily threw down his bat.

Wilde came next. He was the regulars' catcher, and the best batter of the team. Siebold stood, watching closely, a scowl on his face. Almost the same tactics were played, without Wilde ever knowing where the ball was! Another chose three bats before he got one to suit him—this fellow was Kline, the bunter. More than once he had made his base and let fellows on bases in by bunting one at his own feet and in such a manner that it rolled slowly toward the pitcher.

Three balls were called against Gus. The regulars commenced to smile and Siebold's eyes sparkled. Then three streaks came, all over the plate, waist high and "striker out" sounded the third time. The regulars went to the field, the captain walking slowly and thoughtfully.

Gus went to bat and struck out. Little Kerry lifted a fly to left field that the fielder muffed and let roll, so that Kerry slid into second when the sphere was coming back again. Morton, a new

man, struck out as though he were not sure whether he was fighting bears, or was merely in a debate, and Dixon hit a grounder to second and was caught out on first. Still no runs.

Gus always had the short step forward, always the uplifted arm that did not double forward at once. It was possibly confusing, instead of a notice to the batter to get ready, as one might have imagined. Quite a number of balls were called against Gus—fast, slow ones, up-shoots—but never four. Three batters went out in quick succession.

In the third inning Maxwell slowed up a little and the scrubs became wider awake. One of the new men who had, he declared, played ball very little and never shown a genius for hitting, sent a liner between pitcher and first that put him on his base. One of the regulars' former substitutes hit another grounder that let him on first and the new man on second. The third and fourth man, their second time at bat, struck out again and then

came big Sadler to the plate. His very first crack sent a fly so high and wide that the center and left fielders fell all over themselves in their effort to get it, while the center man made a wild throw, so that Sadler rather easily accomplished a home run.

It was three runs for the scrubs, as Gus again struck out. The third at the bat for the regulars proved to be "ancient history," another expression of Sadler's, with this difference: Siebold took his base on four balls, but he didn't get any farther than first.

Little Kerry knocked another liner and this the man on second dropped, the short-stop getting it too late to first. Morton again went out. Dixon hit a liner for two bases that let Kerry in and again the new genius proved himself such by getting in a fly that on errors put him on third. Once more a substitute who after two fouls knocked a ball almost within reach over the first baseman's head, made another home run on er-

rors. The fourth was caught out on a foul, the fifth struck out and Sadler knocked another fly that was caught. Six runs for the scrubs—the regulars nothing.

Smiling, Gus came again to the box. Three batters in quick succession, after only three balls were called for two of them, struck out. They seemed to have no idea where the balls were passing, and little Kerry staggered back with every one sent in, though he, too, was smiling. And then, before the regulars could again take their places, something else occurred.

Siebold merely said: "Hold on, fellows!" He walked straight up to Gus, caught him by the arm and pulled him over toward Bill and Mr. Gay.

"See here," said Siebold; "I'm no piker. I've been dead wrong and nobody has to tell me. So, Grier, honestly I never saw such pitching outside of the national leagues. And if you'll let me, I want to be friends, and I want you on the team.

Mr. Gay, you're right: Maxwell on first and you, Grier, in the box. Are you with us?"

Siebold extended his hand and Gus shook it warmly. The captain turned to Bill. "You, too. We have to thank you for this business, the best stroke of luck we have ever had."

Bill shook Siebold's hand with as much gusto as he would have that of any downright hero. A fellow who could muzzle his pride and do the square thing in this manner, especially after he had been licked in a way that hurt, was a real man.

"And look here, Brown! I've generally messed up this captain business and the managing too; and you have got together a team in short order that I wouldn't have believed could have slammed us for six runs. Will you manage us? I'll see that you are elected. Grier can be cap——"

"No, sir," said Bill. "Gus doesn't want to be captain. You'll remain captain, Siebold, or we'll both take our doll clothes and go home. But I will

try my hand at advising, if you wish. 'Two heads,' you know——"

"Hurrah!" shouted Siebold. "Brown is manager! And we've got a pitcher now! We're going to lick those Guilford fellows so bad they'll think they've got brain fever!"

CHAPTER XX

MARSHALLTON *versus* GUILFORD

Bill for once laid aside everything but his studies to give his attention to the game with Guilford Academy, the last athletic contest of the school year. It was played at Guilford, where the grounds were fenced in and tickets of invitation given. As manager of the visiting team, Bill had his quota to distribute in and outside of the Tech. With his characteristic thoroughness he saw that no one was slighted who was at all worthy, rich or poor. This was not so liberally managed at the Guilford end.

The grand stand was pretty well filled, but Bill had reserved some good seats and to these he conducted the Farrells and their niece, stopping to tell them that Gus was pitching and that they

must root for Marshallton, which of course they did. After this, with some tickets left over, Bill went outside and skirted the grounds, finding a dozen youngsters hunting holes in the fence, and to these he gave his remaining tickets. Not so long ago, he had been just such a youngster himself, and he had an abounding sympathy for those who possessed the keenest capacity for enjoyment, but were excluded without just reason.

The game was typical of such contests between schools of the kind in all except the performance of Gus in the box. That youth, always smiling, never self-conscious enough even to acknowledge the plaudits meant for him, not only pitched with professional skill, but in his every movement showed a grace which demanded attention.

From the first inning the result was a foregone conclusion. The home team held the visitors to no runs and went to bat with the utmost confidence, only to be retired, one, two, three, on

strikes. They shut the visitors out again, and two of them got on bases to remain there and die. They let Siebold come home on Wilde's fly and errors and were again fanned.

They repeated this, with little Kerry at bat and only one of them made a hit, the ball lodging in the pitcher's extended hand. They fought hard and retired the Techs for three more innings, meeting the same fate themselves. Then their pitcher weakened and the team went to pieces, with three men on bases, and Wilde let them all come home on a long grounder, but himself died on second, with two others out on strikes.

They went to pieces again when Sadler knocked a fly over the fence and made a home run, or rather a home walk, and they again were retired in rapid succession. Score, six to nothing, and the Marshallton crowd, including the dignified president of Tech, the instructors to a man, the Farrells and a lot of other sympathizers yelled their throats sore, a bunch of fans going for Gus, hoist-

ing him on high and marching around with him, singing a school chantey:

"He's the stuff,
He treats 'em rough,
He gives 'em easily more than enough.
He's awful tough
He is no bluff,
He made 'em look like a powder puff.
He's fast and quick,
They couldn't handle ball or stick.
He's winning Dick,
They got his kick,
They think they're slaughtered with a brick!"

And so on for half a dozen or so silly verses of the kind, Gus, meanwhile, suffering both physically and mentally, for being thus tossed about is by no means comfortable, and his modesty was such as to make him want to run and hide.

And then the gang went for Bill, but Doctor Field protected him and they expended their enthusiasm on Captain Siebold, Sadler and little

Kerry, the catcher. After which Guilford asked for a return match, but the term was nearly ended and that must go over until next year.

"I wish," said Bill to Doctor Field, as they journeyed homeward, "that Tony Sabaste could have been here to see this game."

CHAPTER XXI

A CLUE

Exams and exercises were over and the students mostly gone. A few remained to brush up on studies, or to complete work begun in the shop. Bill and Gus were among these. They had an order from one of the professors for a very fine radio receiver and it was not quite finished. The matron and cooks had vanished and the boys had to get their own meals. As one after another of the lingerers left, the dormitory became quieter, almost oppressively lonesome, to Bill at least, who was social by nature; but Gus, the hermit, rather enjoyed it.

Listening in over the radio was not neglected. It served to cheer the monotony. Not only were the boys alive to the advertised concerts and enter-

tainments, but they caught a tangle of outside waves that was often quite amusing.

Only two more days were required for them to finish their job. They had decided to let their receiver remain, as they were to occupy the same room next term, and now two receivers at home would serve. The loud speaker had been removed, adjustments made, and now Bill sat at the little table with the 'phones clamped on his ears.

Suddenly he called to Gus: "Get 'em on! Get 'em on, quick! Somebody is sending a message out to Marconi—only the end of it now, though."

"—be most honored, I assure you," came through the air. "Several whom I think you will be glad to meet will be there and we shall be glad to have a word from you." There was a pause.

"It's an invitation to a banquet, or something," Gus said.

"Sure. I wonder if he's going to accept." This from Bill.

"When did he come back? I thought he sailed away last fall."

"Been back a week; read it in the paper. He's on his boat again, the *El*—listen! He's talking."

"Marconi speaking. Gentlemen of the Society of Electrical Research, I shall accept with much pleasure, but please do not put me down for an extended speech. Only a few remarks—probably on my subject. But I shall make no reference to Mars; my interest in that is almost nil. That is a newspaper romance, and I am really getting very tired of being misunderstood. I would be very glad if, in the course of the evening, someone would jestingly refer to this and absolve me from holding such untenable ideas. I thank you. I shall be there."

"Gee-whiz, Gus, I wonder if the time will ever come when we'll get invitations like that, eh? And say, he doesn't take any stock in that message-from-Mars foolishness."

"Well, I guess it's silly, all right," Gus agreed.

"Why, sure. They can't even tell if Mars has any life on it, and if it has, it is mighty unlikely that any kind of creatures have developed brains enough to understand radio. Shucks! No real scientist will waste his time on any guesswork like that. We want to know more through the telescope first."

"But maybe the telescope can't tell us—then what? We want to get at it anyway we can, don't we?"

"Oh, I suppose, in any sensible, possible, likely way, but not on such a supposition. It would be like shooting at the moon: *if* a high-powered gun could get its projectile beyond our attraction of gravitation and *if* it were aimed right, why, then the shot might hit the mark. Too blamed many 'ifs.' And some of the greatest astronomers say Mars isn't inhab—what's this?"

A very distant, not easily understood voice came to them. There seemed to be some interference which not even their well-made loose coupler

could filter out. Apparently there could be nothing very entertaining about this, except the desire to get the better of a difficult task.

"—Atlantic. Latitude 39 — — — chased her, but — lost —. The fog was — — —. On board, when start — — transferred, we think. Headed west. Got a radio from the Government tug *Nev* — —. Think it must have been the same. Putting in toward Point Gifford, they said —. Think they have landed by now. Better opportunity to demand ransom from the —. Italian all right; sure of that. — The banker will — — — — —. So you be — — — —."

The voice died away; a few clickings came and then silence. Bill turned to Gus. In matters of jumping at conclusions, he had long learned to depend most on his chum's undoubted talents, just as Gus, in most things mental, played second fiddle to Bill.

"Say, Gus, could it be—?" Bill whispered.

"Sure is! Nothing else. Ransom, banker, Italian."

Gus felt no uncertainty. "They're after them, sure. Mr. Sabaste has had the hunt kept up on land and sea—we know that. And this is just a clue—an attempt to get on the trail again. Point Gifford—Bill, I know that country. Went all along the coast there once with Uncle Bob. You remember when? He was cutting timber down in the coast swamps. I explored—great place for that! Sand dunes, pines, inlets; awfully wild. Some old cabins here and there."

"They're landing there. Gus, I'll bet they're going to bring—do you think it can be Tony, Gus?"

"Who else? They're trying to make Mr. Sabaste pay a ransom and they're going to be in a place where they can make sure of getting it. What Tony said about the Malatesta bunch being short of money must be true, and I guess that

restaurant business made it worse. They're going to try to make a pretty sure thing——"

"But Gus, this radio was intended for somebody on shore who will watch them and maybe nab them."

"No, indeed. They're not likely to nab them. They have already landed, you see, and the detectives will watch the Upper Point, which is the only landing place. But if these chaps are foxy, they will come to the Lower Point, ten miles south, and cut across the inlet and the thoroughfare in a small boat. Then their yacht, or whatever she is, will sail up past the Upper Point, put to sea and the detectives will think she has given up the idea of landing. I rather think I'm on to what their scheme will be. An old oysterman showed me what some smugglers did, and got away with it for a long time. I guess the state police never have got on to this."

"Well, then, Gus, it's up to us to tell——"

"With several thousand dollars to save for

Tony's dad? And who would believe a couple of kids, anyway?" demanded Gus.

"But how——?"

"Let them watch the Upper Point, and if they land there, all right. I'm going down to hunt over the Lower Point."

"You, Gus? But these fellows are a bunch of desperate scamps; gunmen, no doubt. There'll be a lot of them, maybe——"

"No; not more than two or three. Luigi Malatesta, his brother, I think from Merritt's description, and an accomplice or two."

"Four, Gus; maybe more. You wouldn't have a chance——"

"Well, not in a stand-up fight, I suppose. But they won't be suspecting a kid in old fisherman's duds, and I can do some bushwhacking, I guess."

"But if you get hurt, Gus?"

"Well, there's a lot more like me everywhere. Another brother at home, too. I'm going to try for it, Bill. I'm not going to tote a pistol, but take

Dad's hammerless, double-barreled shot-gun. He has quit hunting, and he said I could have it. They'll think I'm just a native."

"But where are you going to hang out? Your Uncle Bob isn't there any more."

"With old Dan, the oysterman. He'll be tickled, I think, and I'll pay my way."

"Don't get hurt, old fellow. I wish I could go with you."

"You bet I wish you could, Bill. But you pick up what you can and maybe you'll have a chance to get it to me in some way."

"Oh, Gus, I know a scheme: That portable set we made Tompkins—it's in his room. He would be tickled, for he liked Tony, and he has gone to Saranac Lake. They've got one up there, so he didn't take this. We'll get in his room and get it for you to take along. Then I'll stay here, glue my ear to the phones and radio you everything I know, for they are all away, and I can use their transmitter."

"Portable idea is fine, Bill, but all the rest is bunk. What, really, can you do here?"

"Well, then, I know: We'll swipe the keys, unhook the school transmitting set and I'll go with you and set it up at Oysterman Dan's. Then we can work together."

"Fine! But how about the license?"

"Got one. Merely change of locality, and my own license will let me operate anywhere. Let's get busy."

CHAPTER XXII

AT OYSTERMAN DAN'S

It was a good cause, yet the boys were up against a doubtful procedure. The janitor of the school was a good-natured, but stubborn chap. He liked Bill and Gus, but they knew he would never let them take anything from the buildings without special consent. And while there was no time to get this permission, Bill and Gus knew that all concerned would be in favor of their motive. If they injured anything they knew they would more than make it good; or that Mr. Sebaste would make it good. Even Mr. Hooper would, if called on.

So they wrote a note to Mr. Hooper, explaining fully what they intended doing and requesting that he reimburse the school for any loss or injury to the broadcasting instrument in case anything

happened to both of them. Then they placed this letter where it would be found in their room, with a request to the finder to deliver it.

The janitor, they knew, was a bug on fishing. Bill coaxed him to take a day off while they watched the place. He did this, and while Mrs. Royce was strenuously engaged with her housework, the boys got the keys to the radio room. The rest was easy, even to fixing up camouflaged parts that would befool Mr. Royce, if he should enter the room. They got the apparatus in parts to their own room, where they packed it up, and Gus climbed into Tompkins' room through the transom, handed out the portable set and got out the way he got in.

The next day, again sending for Mr. Merritt and his taxi, they were on their way to the station at Guilford, and from there by train to the shore, Gus debouching at a convenient junction for a two-hour trip home, while Bill patiently waited. When Gus got back to the junction he had the shotgun

and some old clothes for both, though Bill might have no need to disguise.

Reaching the terminus of the railroad, the boys hired a rather dilapidated team of mules drawing a farm wagon, with youthful driver to match, and made a long, slow journey, especially tiresome to these eager, expectant lads, that landed them by the most direct route at Oysterman Dan's little cottage.

The old fellow came out and was so delighted to see Gus that he gave him and Bill a real welcome. He was a bachelor who lived alone, but lived well. He kept to himself and yet was not averse to having a little company of his own choosing. Apparently he would not have wanted more entertaining fellows than Bill and Gus, or better listeners, for he liked to spin yarns. When he found the boys insisted upon paying him for board and lodging and certain privileges he was further pleased. Let them put up "one o' them thar wirelesses?" He sure would and welcome.

It would be a "heap o' fun," and when they told him of the purpose of it he was elated.

Nothing could have been more characteristic of the imagination and optimism of youth than the making of all these extensive preparations on the merest guesswork, and after the boys had arrived on the scene, not half a mile from Lower Gifford's Point, doubts began to assail Bill with much force.

"By jingo, Gus! Here we are, at considerable expense and a deal of trouble, taking it for granted that we're going to do wonderful things, and we even don't know that the theory we are working on is worth a blamed thing."

"Oh, yes; we do," said the intuitive Gus, who, looking like a woebegone swamp dweller, had just come in from the dunes. "And soon we'll know a whole lot more. I just saw two gunners in the woods above the point, and if they aren't Italians I don't know one."

The boys were a long day putting up their transmitting instrument, with its extensive aërial

stretched between tall pines near the cottage. They would depend on the portable receiver.

And then, leaving Bill listening, poring over books, or chatting with old Dan, when the latter was off the water, Gus got into his ragged togs again, took his gun and started out prowling. And he prowled wisely and well.

CHAPTER XXIII

GUS

"HEY, fellow! What you do?" The voice came from among the pines, and Gus turned to see a dark-skinned, black-eyed young man, of about twenty-five or more, coming toward him. Gus stopped.

"You shoot in these woods?" asked the man.

"I reckon I might an' I reckon I do if I kin find any durn thing fer t' shoot," said Gus, easily falling into the native vernacular.

The man approached and the boy quickly observed that the pocket of the loose coat, worn even this hot day, bulged perceptibly, and the man put his hand within it. He showed an interest in the shotgun and extended his hand.

"Where you get so fine gun, eh?" he questioned.

"Man give her t' me fer beatin' him at shoot-

in'." This was literally true, the said man being Mr. Grier. "He's a sportin' feller, but he don't shoot no more. Hain't seen him round these here parts fer two year."

The fellow took the fowling-piece and looked it over. He said:

"I buy her, eh?"

"You couldn't buy her if you had her heft in gold," said the boy. "An' you couldn't shoot her, anyway—not to hit anything. Could you get a bird with her goin' like a bullet through these pine trees? Shucks! I kin."

"No! Yes? I get you shoot for me, eh?" handing back the gun.

"Shoot fer you? How?"

"You don't like law policemans, eh?"

"You wouldn't like 'em if they chased you fer shootin' when the game laws was on."

"I think of that. You come into woods along of me, now, eh? I show you what do and how make large lot money. Big! And maybe how shoot

policemans to keep away. Big money you get."

"Lead me to it!" said Gus, his swift guess at what might be coming making him shove in a less backwoodsy phrase.

Without another word the man started along a tortuous and narrow path and Gus followed for more than half a mile. They were just off the thoroughfare when they started, but the youth could hear the distant booming of the ocean waves on the beach before they stopped.

To the right, with a roof seen above the low underbrush of young pines, holly and sweet gum, was a building of some kind toward which the path turned abruptly. A hundred yards ahead the woods ceased, and Gus knew that beyond were the ever-shifting sand dunes crowned with their short-lived scrub oaks or pines and tufts of beach grass which bordered a wild and lonely shore for many miles. Twelve miles to the south was a somewhat popular seaside resort.

Gus had not crossed the woods at this spot,

though he had at some other very similar places. He had been all along the beach and had boated on the thoroughfare clear to the inlet. This was nowhere deep enough for even a large sloop. But he was thinking less of this than of a very possible opportunity that seemed to loom ahead.

"What your name?" asked the Italian.

"Sam is my name," said Gus.

"Now then, Sam, you stay here. If some man who no business has here come to look, you give order to go—see? You say this your father's ground and no—what you call?—trespass. All this day you stay. To-morrow you come, also. Two dollar you get each day, eh?"

"Thought it was *big* money. Mebbe I'll have t' shoot somebody an' I will, quick. But——"

"We give three dollar, Sam, and you stay with us. If not and somebody comes you get nothing but this." The man slapped his pocket. "But no, we friends, eh? And you will shoot?"

"You bet I will!" said Gus, and meant it. But whom would he shoot? He was not saying.

The man went toward the building and presently came back with a modern, high-powered rifle. He edged off through the woods to the left. After a while he came back with another fellow and they fell to talking in a language which Gus could not understand. They stopped for the new man to look Gus over and the boy turned his head to gaze at none other than his late schoolmate and bitter antagonist, Luigi Malatesta!

The general resemblance between the two men made Gus know that he had been talking to the older brother. Luigi, the younger, went off. At that distance he could not have recognized Gus, though for one moment the boy had a queer feeling, a real bit of fright, but not enough to rob him of the quick sense to be ready with his gun if his enemy had guessed his identity. On second thought Gus felt pretty sure that if he kept his

ragged hat well pulled down Luigi would never know him.

And Gus was tremendously elated, so much so that he could hardly keep from prancing or slapping himself; but the danger of what he meant to do, and to do quickly, kept him from undue exuberance.

The elder Malatesta brought one other fellow, evidently an American, to take a squint at Gus. Gus called the Italian over:

"How many of you got here, hey? I don't want t' shoot one of——"

"Not any more; three of us; you four."

"What is all this fuss fer?" asked Gus.

The fellow seemed to ponder a moment. "I tell you," he said, as though with sudden conviction. "In the hut yonder is crazy man. Our brother, yes. We love heem, ver' much. But he malsano—insane—lika fury. And we disgrazia. But he not go to a silo—hospital and treat bad. Oh, no! We swear it! They want getta heem.

We hid heem and give heem treatment—medicine, lika say great doctore. Doctore come two day—more tardo. We guard brother ver' fierce—fight—fight! No let go—no let policeaman come. See?"

Gus nodded slowly. It was a well-told yarn, a plausible lie. In a good cause could he not take a turn at that?

"By cracky, you're dead right t' make 'em mind their own bizness! It's your bizness, ain't it? I'd serve 'em that-away, too. I'll bluff 'em, an' shoot, too, if I got t'. Where's these other two standin'?"

The man indicated a spot to the left, another beyond the cabin, and his own position toward the beach. They probably stood on sentry duty most of the time. Gus was given the most dangerous place, the one most likely to be the way of approach. Well, he'd better act, and quickly, if he didn't want the officers of the law to step in ahead and spoil his own plans.

Gus waited until he felt sure the men had taken their places again. Then he contrived a neat bit

of strategy that was almost too simple. He meant to get a peep in yonder building, or hut, as the elder Malatesta had called it, and he meant to do this at once. Rapidly and silently he sneaked through the woods until he stood close behind the American gunman who sat drowsily on a log, his gun across his knees.

"Say, bo, get next. They's a couple o' men sneakin' through the woods round beyon' you. They ain't comin' my way. Lay low an' watch 'em." The man crouched.

Gus crept back and then out toward the beach where, by sheer good luck, he came across both Malatesta brothers talking. When they were still at a little distance from him he told them the same story and instantly the elder was on his guard while the younger brother left, crouching as he progressed toward his station. Gus, also crouching, went back quickly.

The boy felt sure that these fellows were armed and that they would remain fixed for a very con-

siderable time—all of them well out of sight of the building. Cautiously at first, then almost running, Gus followed the path right up to the door of what was really a stout log cabin, the one window barred with heavy oaken slats, recently nailed on, and the door padlocked. Gus went straight to the window, thrust aside a bit of bagging that served for a curtain and peered within. Speaking hardly above a whisper, he said:

"Hello, in here! Who are you? Is it Tony Sabaste?"

CHAPTER XXIV

THE PRISONER

"Well, what do you want? Who are you?"

Gus felt his heart almost leap in his bosom. The voice may have been a little huskier, with an accent of suffering and despair, but it was recognizable.

"Keep very quiet, Tony. I'm not supposed to be here, but out yonder, guarding the path. Paid to do it, you understand? But lie low until tomorrow. Then——"

"But tell me; I seem—I—who can you be? Oh, what——?"

"Oh, you don't know me, sure enough. I'm Gus, Tony—Gus Grier. Bill Brown and I are down here to get you. We—, but that must keep. Lie low, old chap. I've got to get away now and go awfully careful, but it'll be all right——"

"Oh, Gus! My friend Gus! You here and for me? I believed the world—but no matter now. Oh, my good friend Gus, you will not never give up? You will—oh, my friend——"

"Go slow, Tony, not so loud! Do you think we would come this far and then go back on you? I must get away now—right off. Lie low."

Gus felt an almost irresistible desire to break open the window or the door at once and get his friend out. Then, if need be, fight their way to safety, but common sense told him that the certain noise of doing such a thing would be heard and perhaps his effort defeated, with great danger to himself, and Tony, too. If there had been but one guard or even two—but three were too great odds.

Back he went to his position, and there he watched for the rest of the day, elated with his discovery of Tony, saddened by the delay, grinning at the thought of the Malatesta and their

confederate compelled to watch, almost motionless, for the supposed prowlers.

At last darkness threatened. Those small banditti, the mosquitoes, as bloody-minded as the Malatesta, began to sing and to stab. The assassin owls made mournful cadences in keeping with the scene and its half-tragic human purposes, while the whippoorwills voiced the one element of brightness and hope.

The young fellow in the narrow, dark, log-walled cabin, with its barred window and padlocked oaken door, had been long disconsolate. But now, for the first time in many days, hope came to him as he walked back and forth, fighting pests, still tortured in mind, fearing failure, wondering, praying, yet proud and never beseeching, waiting for another and perhaps a brighter day.

For three months he had been a prisoner, waking from a fevered sleep after a long illness, his splendid constitution alone serving to doctor him, he had found himself mysteriously at sea, in the

locked cabin of a tossing yacht that knew no harbor of rest. He had been denied even the chance to talk to, or to know his jailers. He had managed to keep alive on the rough, often unpalatable food poked under his door. There was no response to his callings, hammerings or threats. A less balanced, hopeful, kindly, gentle fellow would have gone insane.

Then, gagged and bound, he had been dumped about almost like a sack of wheat and landed in this horrible place alongside of which his prison room in the yacht was a palace. Now here for the first time had come a friendly voice, that of more than a friend, indeed, and he had again seized upon hope.

Yes, he would lie low, be patient, hope on and wait.

CHAPTER XXV

STRATEGY

"BILL, Bill, we've found Tony! Saw him a little in the dark and talked to him. We're going to get him out, Bill!" And Gus, after bursting in with this good news, told his chum and old Dan all about it. Then they held a council of war.

It was pretty certain that the Malatesta had no means of radio communication, as they could not have burdened themselves with the apparatus, nor could they have confined their communications to one person. That they were seeking ransom money was also pretty certain, and they were in a position to get it, too.

Bill, Gus and old Dan laid some plans, carefully considered from every angle, and with the impetus of youth to be acted upon at once. Having put their transmitting station in operation, Bill

got busy on the wires, and on a wave length of 360 meters, began broadcasting notifications to Mr. Sabaste and to the police relative to Tony's whereabouts.

"Mr. Angelo Sabaste, do not send ransom money. Mr. Angelo Sabaste, do not send ransom money. Please convey this message to Mr. Angelo Sabaste, banker, of New York City, do not send ransom money. Police departments and coast patrol, send swift vessels all along the coast to Lower Point Gifford, and the lower inlet to head off any foray from the sea on the part of those who may have caught this; also to prevent escape of kidnapers from the inlet.

"Send men to surround the point and cut off escape by land along the peninsula north of the inlet; also to watch the lower thoroughfare. Some men meet the senders of this at Oysterman Dan's, in neck of woods above Lower Point Gifford, to raid kidnapers' roost from there, and effect rescue of young Anthony Sabaste.

"Station men and vessels to-night. Watch all landing places around Lower Point. Be prepared for trouble. Kidnapers armed and will shoot. Anthony Sabaste in small cabin in pine woods about one mile north of inlet. Hard place to find. Guarded by three men.

"This is William Brown speaking, at Oysterman Dan's cottage—for Augustus Grier, also. Have situation well in hand. Please radio reply at once."

Bill switched off his batteries and clamped the 'phones of the receiver to his ears. He had to listen in for but a few moments.

"Police Department, City. West Rural Section speaking. We are in direct communication with East State Mounted Force and contingents and will relay, acting in unison. Also in communication with coast patrol who also have your radio, no doubt, and will act independently. We are sending men and will make raid in morning, closing in north of Lower Point. Men sent to

Oysterman Dan's house to-night. Coast patrol will also go out to-night. Will advise you personally in the morning. Have Dan send boat for men across thoroughfare to Stone Landing. If men not there by three A.M., go to Possum Beach and wait."

Bill still listened and the message was repeated, almost verbatim; then silence. He communicated the information to Gus and old Dan, and the oysterman went off to tidy up his boat for the trip. Bill and Gus decided to snatch a little sleep. Old Dan, who had napped in the afternoon as usual, agreed to wake them before he left at about two o'clock, which he did.

"Bill, I've got a hunch we are going at this thing a little too fast," said Gus.

"How too fast? We can't delay at all, can we?"

"But suppose, when the police make their raid, these Malatestas get desperate and mad enough to kill Tony? They're a bad lot. I've a notion

we ought to get Tony out of there before——"

"The iron gets too hot, eh? I guess you are right, Gus."

"Look, Bill, here's a scheme. What if we work it this way?" Gus proceeded to outline a plan with every detail of which Bill agreed; and it called for action.

Taking the revolver and some extra cartridges, Bill hobbled along by Gus, who gave him a lift, now and then, piggy-back. The boys made their way south for more than a mile along the thoroughfare swamp edge. Then they turned sharply on a path across the wooded peninsula to the beach, and went another half mile among the dunes. A very tall pine tree against the sky-line gave Gus his bearings. A little below that they stopped, and Bill found a comfortable hiding-place among scrub pines, with the boom of the breakers in his ears and the sea breeze keeping off the mosquitoes.

Gus cast about silently for the path that led in to the kidnapers' cabin. Finding it with some

difficulty in the darkness, he noted certain landmarks and went back to Bill. Agreeing on signals in whispers, Gus went back to the path and struck a match, whereupon Bill fired a shot, and immediately afterward, another. Then Gus swiftly made his way directly toward the cabin, and when near it, called softly:

"Hello, hello, you fellers! It's me, Sam."

There was a very profound silence for a few minutes. Gus called again:

"Hello! It's me, Sam. Don't shoot!"

And very much with his heart in his mouth, but still determined, he advanced, crouching low so that a bullet would most likely pass high over him. Suddenly a figure appeared directly in front of him and a flashlight was thrown in his face for an instant. Gus knew that he had been identified.

"Lay low," he whispered, not forgetting to keep up the dialect. "They're out there, somebody—sneakin' along in the open. I seen 'em an' let fly at 'em an' they shot back, but I run on down the

woodses. Git yer gang an' come along so's we kin head 'em off if they start in here."

"How we do that? We stay here an' fight 'em, eh?"

"An' that'll give 'em the lay o' this place. We want t' draw 'em up the beach. Chase along up through the woodses an' come out 'bout a mile above and shoot oncet er twicet. Two of us kin do that an' two kin lay out yan at the end o' the path an' watch fer any of 'em startin' in this away, an' then you kin lead 'em off. See? That's the way the smugglin' fellers do it."

The plan must have looked good to the fellow still in the darkness; Gus did not know to whom he was talking, but he heard the man walk away rapidly. He waited, as though on pins, and in a moment three figures loomed before him, one voice questioning him again. The boy tactfully repeated his suggestions—then turned back with them as they started forward, evidently agreeing.

One fellow, Gus could see, was rubbing his eyes. All carried guns.

Two men kept to the path that led toward the beach edge of the woods. Another and Gus went straight on. Presently Gus suggested that they stop and rest awhile; then move on farther up, stop, scatter a little, and listen. He would sneak out into the open, he said, and look around. There was no danger of his being seen. It would be best to remain thus for an hour or more—perhaps till morning, mosquitoes or no mosquitoes. A grunt signified agreement.

The boy crept out toward the dunes and on, until he felt sure he could not be heard. Then, with the smooth, hard sand for a track he ran, softly on tiptoe, until once again he came below the tall pine. A low hiss thrice repeated was answered, and he found Bill in the same spot.

"They're all stuck along in the woods yonder," Gus whispered. "If you hear them moving off toward the cabin again, shoot. If they go on,

shoot twice. If they come your way, lie low. Here goes for Tony, old scout!"

Gus had some difficulty getting to the cabin from the south side. He missed it once, got too far into the woods, turned, regained the dunes, struck in again and this time started to pass within a few yards of it, but by merest chance saw the gable end against the sky.

CHAPTER XXVI

A CALL FOR HELP

AGAIN Gus approached the cabin, feeling sure now of the outcome of the plan. He reached the clump of thick pines below the tall one and turned to make the bee-line in, not a hundred yards from the building, when the alarm notes of a ruffed grouse reached his ears. It was just ahead, the angry, quick, threatening call of a mother bird, disturbed with her young, quick to fight and to warn them of danger. Might not this be a weasel, fox or mink that had sneaked upon her? But if so, it would be the note of warning only, to scatter the little ones into hiding-places while the hen sought a safe shelter just out of the reach of the marauder and after she had, pretending a hurt, led it to a distance from the brood.

But this was different. The grouse had played

her usual trick of decoy, no doubt, and failing in this had returned to attack something regarded as a larger enemy. She would know better than to include deer, or the wandering, half-wild cattle of the peninsula as such. There were no puma and few bear in these woods, and surely none here. What then could the disturber be but a man? Gus well knew the ways of these knowing birds.

The boy's advance now became so cautious as to make no audible sound even to himself, such being possible over the pine needles. Slowly he gained a vantage point where again the roof gable was visible against the sky. No sound ahead, except the mother grouse making the sweetest music imaginable in calling her young ones together during a half minute. The coast must be clear,—but just as the boy was about to go boldly forward, a flash of light shone about him and his staring eyes discerned, not thirty feet away, the three watchers standing together. They had returned,

probably by pre-arrangement and had met in the roadway. Now they were silently listening for the fourth fellow—himself. One chap, thinking that they were not observed, had struck a match to see the time, or to light a cigarette. Had they been looking in Gus's direction they might have seen him. Presently, mumbling some words, they all went on again toward the cabin, and Gus, sick at heart because seeing now no chance for a renewal of his effort, turned back after an hour to where Bill waited.

"Why, Gus, they came out here, all of them together and went part way over to the beach, then returned almost right away. I could hear only their voices at first, but when they came back they passed close enough for me to hear a little of what they said. I think it was the Malatesta that we know. He was declaring that 'he,' and I guess he meant you, must be the same. Do you think he knows you, Gus?"

"I don't know. They must be suspicious of my

story, or my purpose, anyway, or they would have stayed out and watched. Perhaps one of them followed far enough to hear me head out this way. Anyway, they think the cabin is the safest place. We can't do anything now, so let's go back and hit the hay."

They went back, Gus to throw himself on old Dan's couch and sleep like a dead man and Bill to take up the receiver phones, nodding over the table, to be sure, but remaining generally awake. For two hours he kept catching odd bits of no importance through long intervals. Then suddenly he sat up and, reaching over, poked Gus with his crutch. After two or three hard pokes Gus opened his eyes.

"Say, somebody's calling for help! I can't get it right. I reckon they've taken Tony away and out to sea again. Can't tell who it's from; it's all jumbled, anyway. Done now, I guess."

"But what was it?" asked Gus, now very wide awake.

"It came like this, in code," said Bill. "The 'S.O.S.' several times. Then: 'Aground. Rounding inlet, east channel, headed out. Hurry.' There was a lot of stuff in between, but not intelligible."

"Can it be Tony?"

"Who else?"

"But would they let him broadcast anything?"

"Gave them the slip, maybe."

"What'll we do?"

"You say it."

"Well, then—rounding east channel of inlet, eh? Tide going out. Likely they'll stick on the shoals. If only Dan were here now."

"What then?"

"Why, we'd take his catboat and overhaul them. They'll probably stick going about and the wind's dead against going out. But Dan——"

"Isn't here, but I am. I'll go forward with the gun and you can handle the *Stella.* Let's go!"

They went. It was but the work of a few min-

utes to gain the landing, hoist sail, cast off and reach down the bay, the wind abeam. Bill got into a snug place at the mast, Gus held the tiller, each boy firmly determined to do something that might call for the utmost daring and swift action.

Turning into the wind at the inlet, the boys went about first on the starboard tack and then luffed a half dozen times to get through into the broader water; but the sand bars were erratic. Gus knew two that were fixed from the set currents; other might change every few days. Bill crept to the rail and gazed ahead; there had been a moon, but it was cloudy.

Fortune favored them, however. At the moment that they were about to hit a narrow sand bar, the clouds parted and Bill gave a yell. Gus also saw the line of white and shoved over his tiller, missing the bar by the closest margin. In deep water again they swept across the inlet as the clouds darkened the moon and they were suddenly confronted by a splotch of white. They

swerved once more just in time to avoid striking the stern of a small schooner fast on a bar, only her jib flapping in the breeze, not a light showing.

Gus put the *Stella's* head into the wind and close-hauled the boom, but she fell away slowly. He told Bill to hail, which was done with a truly sailor-like "Ahoy!" repeated many times, and followed by the landlubber's "Hello, there!" but without getting an answer. Gus had to work around to get the wind so as to come up again. Still there was no reply to the hailing, and without more ado the *Stella* was put alongside of the schooner, going also aground, but lightly.

"You grapple and hold her, Bill. I'll board her and see what's what," said Gus, pistol in hand, stepping over the schooner's rail.

Swiftly, without hesitation, he rounded the cabin, peered down the small companion-way and shouted into the cabin door, calling loudly. Then he went back, got the *Stella's* lantern, and Bill, having made fast, limped along after, gun in hand.

The two silently explored every nook and cranny finding, to their utter astonishment, no one aboard. The door to one of the staterooms, however, was fastened.

"I wonder if somebody is in there," whispered Gus.

"Must be. Looks funny. Let's call," Bill suggested.

"I guess we'd better beat it and mind our own business," said Gus, loudly. "Come on, we don't belong here at all."

Had the boys been suddenly confronted with a genie, at the behest of Aladdin's lamp, their surprise could not have been much greater than at the response from within the room. It was a girl's voice that reached them, and though very sweet and low it was full of trepidation.

"I hear you. What can you be plotting now? If you intend to kill me you will have to destroy this boat to do it, for I'll surely kill you if you try to break in here. Now, you'd better listen to

me again. Sail back and I'll see that you're not arrested and—I'll get you a reward. You will only get into jail by this——"

"I guess, Miss, you're talking to the wrong party," said Bill.

"You're mistaking us for somebody else," asserted Gus.

"Oh, who are you, then?" came the voice.

"Two fellows at your service. We got a radio at Oysterman Dan's and thought we could rescue——"

"I sent it. I got to the wireless when they were working to get us off. But please tell me exactly who you are."

"We are Marshallton Tech boys, down here on vacation,—that's all."

"Oh, you are? We know the professor of political economy——"

"Jennings? He's one of our favorites—fine chap."

"And that was where that boy was kidnaped, too."

"The same. He never turned up." Bill nudged Gus.

"Two weeks ago I was at Guilford and saw the ball game with Marshallton Tech," said the voice.

"Hooray! Right out here with me is the pitcher who won that shut-out for us."

"No! Do you really mean it? And then it was you who hailed and came aboard just now, and the others have not returned? I can trust you, can't I?"

"Why not? We're really harmless. But tell us who are these fellows?"

"I do not know, except that they are scoundrels and thieves,—of that I am sure."

The door suddenly opened and a figure stood before the boys, something white, glistening and menacing in her hand. An arm was outstretched to turn a switch. With the flooding light Bill and Gus beheld a very pretty girl of about their

own age, who smiled at them and hastily held the revolver behind her. Reassured, she calmly continued:

"I am Lucy Waring. May I ask——?"

"My chum here is Gus Grier and I am Bill Brown."

"I shall be indebted to you forever," the girl said graciously. "You see I am in an awful fix. Those men deliberately stole our boat. This is my father's auxiliary yacht, the *X-Ray*. My father is Doctor Louis Waring, of——"

"The great Doctor Waring, nerve specialist?"

"Nerves, yes. I believe people call him great sometimes. You see we have a summer home at Hawk's Bill, just below the inlet here, and we girls, my two sisters and some friends are there now. Father and Mother are coming down to-morrow. I'm fond of boating, and sometimes, just to be on the water, I come down and sleep in the yacht. To-night I did and I waked up to feel that we were adrift and sailing, with somebody

on board—two, I think. While I was wondering what to do, one came and tried my door and called to me. I said something to him, you may believe! But he would hardly listen to me, though he couldn't force the door and I told him I'd shoot if he did. Presently we went aground and the men went back and started to work with the motor. I slipped out and got at the wireless, locking my door after me and locking the wireless room door. I don't know how they didn't hear me, though they were making an awful racket trying to hammer something. I sent several messages, then I listened and still heard them talking and slipped back. They couldn't get the engine to run—it can hardly be cranked, but it has a starter which they didn't understand. About half an hour ago they went off in the dory and I thought they were returning when you came."

"And you have no idea who they are?"

"None whatever. I only know that the talk of the one that called to me sounded as though he

were a foreigner, perhaps an Italian—about the other I couldn't say. They surely meant to steal this boat, and if they had not stuck here, I don't know whatever would have become of me. And now, may I ask of you to——?"

"Start that motor and get you back? You sure may—and it ought not to be much of a job."

"My father will liberally reward you."

"We don't want any reward, Miss Waring. Doing mechanical stunts in trying to rescue people is our specialty."

CHAPTER XXVII

UNDER FIRE

"I HAVE a hunch," put in Gus, "that those fellows may come back any minute, possibly with some means, or hoping to get this boat afloat. We don't want them to catch us off guard."

"I'll stand watch," said the girl. "The slightest intimation——"

"Good. Let's look at that power plant," demanded Bill.

It was a matter of minutes only, although the time was lengthened by the boat thieves' having hammered the gearing that connected with the starter, trying to slide it along on its shaft key in order to permit the cranking. They had failed in some way, however, to manipulate the gas and spark.

The boys had slipped the gearing into place

again and the adjustments had been made, when a call from the girl made the busy lads grab their weapons and get up on deck, Bill being almost as quick as Gus.

Not fifty yards away and plainly seen in the now unclouded moonlight, a skiff was approaching. The boys, lying flat on the deck and peering over the rail, and the girl, crouching in the companion-way, could see three persons in the dory. Gus again told Bill to hail.

"Ahoy, there! Back water and stay where you are! What do you want?"

The rhythmic beat of the oars continued, rapidly lessening the distance.

"Halt, or we'll shoot! If you don't want to get sunk and have your carcasses filled as full of holes as a pepper-box, you'll sheer off!"

This had its effect. The oars were held and pushed to check the motion. No word came in reply, but Gus plainly saw an object that resembled a gun barrel come from a vertical to a fore-

shortened position. This was sufficient for drastic action, though the boy was averse to compelling a tragedy. With careful aim he sent a load of shot just over the heads of the boatmen, then instantly fired another into the water at one side. Almost immediately a shot came in reply, the bullet glancing from the cabin roof.

Gus slipped in two more shells and coolly waited, knowing that there was only a remote possibility that the shots from the dory would do any great harm, but intending, if the rascals fired again, to give them a real taste of buckshot firing, at the bow of their boat first, to splinter and sink it gradually; then at the men if they persisted.

The dory turned about quickly. The oarsman was evidently in haste to get away. Then came a hail:

"Say, you! What you do in thata boat? That our boat! Get out, I say to you! We want to come aboard and go on away!"

Gus had heard that voice before. It belonged

to one of the Malatesta. Did they have Tony with them? Were they making a terrible effort to escape in this way from the peninsula, and get to sea again? How then would they secure the hoped for ransom? Or were they merely going to hide the *X-Ray,* expecting to use her if their scheme fell short? Bill had sensed the situation.

"*Your* boat, is she? You'll find her back at Hawk's Bill where she belongs, and in a little while you're going to find yourself in jail. Beat it now while the water's fine!"

The oarsman was nothing loath. Either he was not the bravest in the party, or else he had the keenest appreciation of the odds against an exposed position. In a very few minutes the dory was a mere gray wraith on the water, but there it hung. Evidently the rower was overruled by others less cautious, or of the certain conviction that at the distance the yacht was a better mark than a rowboat.

Bill had the motor going in a jiffy. Gus was

at the wheel, crouching. Throwing in the reverse clutch he sent the boat off the sands. Then, letting Bill hold her steady, dropped the *Stella's* sails, cast her loose at the end of a hauser for a tow rope, paid it out from the stern and went back to the wheel.

He was about to swing round and head back into the narrow channel free from sand bars, which he could discern by the rougher water, when bullets began to come from the dory. They were aimed at the wheel and whether sent low or not, the trajectory, even from a high-powered gun, would pull them down to the danger level. One struck the mast directly in front of him. One hit the deck and glanced singing. The music from another flattened bullet was stopped by the water beyond.

Gus wanted desperately to get behind something, for this firing might mean death or wounding at any moment. But he held on, hoping shortly to get out of range. Bill, at the rear

hatch, called to Gus to set her and come below, and Gus called back that they'd be aground again in a minute if he did. Then a brave deed was done.

The girl, perhaps as fully aware of the danger as the boys, leaped into the cabin, came out with two chairs and some cushions, erected a barricade alongside of Gus and said to him:

"I want to get back and we can't stop, but most of all I want you to be safe."

Then she gave a sudden cry and staggered into the cabin. Gus called Bill, who limped across quickly. The shots continued, and one hit the chairs. Gus wondered where it would have hit him. Presently they were too far away for the shots to reach them, for they had entered the narrow bay.

CHAPTER XXVIII

ANOTHER SCHEME

BILL was not cut out for a nurse. His sympathies were large, but his fingers, deft at managing fine mechanical apparatus, were all thumbs when it came to anything even remotely concerned with human anatomy. The girl had been hit in the shoulder, undoubtedly a mere flesh wound, and the bleeding must be stopped. Lucy was very pale, but there was never a tear, nor the least indication of her fainting. She merely held her arm down and watched, with most rueful countenance, the blood dripping from her finger tips upon the polished floor.

"I'll get Gus," said Bill, almost ready to weep at the sight the girl presented. She had torn her dress from her shoulder and a seared gash was disclosed which she could not well observe.

Gus pointed out the course to Bill, then went into the cabin. In a minute or less he had searched and obtained clean rags, torn strips from them, found a nearly exhausted bottle of vaseline, coated the rag with it and, with a deftness almost worthy of a surgeon, washed the wound with a quick sopping of gasoline. Then as more blood was flowing, he bound up the shoulder and arm so that the flow stopped and by its coagulation germs were excluded. Whereupon Lucy sought a couch where she lay, exhausted, and with a decided desire to cry, while Gus went back to the wheel.

* * * * * * *

"You shall hear from father and mother and all of us. They will be here early and father must see you." This was the very earnest declaration of the elder Waring sister, a young woman of twenty-five or more. "I cannot alone express our thanks, our deep gratitude——"

"To use a rather slangy expression—please 'forget it,' " said Bill, laughing.

Lucy, supported by another older sister, could only thank the boys with her pretty eyes. She did make so bold as to hold the hand of poor Gus until he turned a fiery red. Blushing herself, even through her pallor, she still persisted in trying to show her appreciation and admiration. Bill had to grab and pull his stammering chum away.

The run back in the *Stella* was made in rapid time to her owner's slip. And there, the morning light just beginning to show in the eastern sky, the boys found an odd-looking fellow busily getting ready to cast off a fishing skiff. He was one Pepperman, commonly called "Swamp" for short. He was something of a crony of Dan's and the boys had seen him before.

As they headed in they made out the identity of "Swamp." Gus suddenly had one of his ideas. He conveyed it to Bill in few words:

"We'll get 'Swamp' to go to those Malatestas and tell them he can steal them a boat. Then we'll get Tony away if he's still there. You talk to 'Swamp.' "

"Hello, Mr. Pepperman! Going fishing?" began Bill, as they made fast and lowered sail. "Yes? Expect to catch much? No? Well, I know something that will bring you in two hours more money than in three weeks of the best fishing you ever had."

"Swamp" wanted to know how such a thing could be done. Said Bill:

"Dead easy! You take a walk right away down through the pines toward the Point. Know how to whistle a tune? Sure; well then, come over all the tunes you know. Let on you're hunting for special fish bait or something. Sheer off toward the big pine and keep through toward the ocean. You'll meet somebody likely. Don't get curious, but talk fishing and boats. Tell them you take folks fishing and that you have a dandy boat all

ready—a fast one. They'll probably want to see her. Tell them you keep her up here, but if they'll hang off shore at the Point you'll sail her around there. Then, when they leave for the Point and you're sure of it, you come up the bay side road and tell us. We'll be waiting. How much is there in it? Twenty-five dollars, Mr. Pepperman, if your errand turns out successfully. Is that enough?"

"I reckon hit air," remarked the sententious "Swamp." "When do I git the money?"

"Any time—to-day," said Gus, and without another word the lanky fellow, laying aside his tackle and bait of crab meat, was off into the woods.

Hardly an hour passed before Gus remarked to tired and sleepy Bill: "Somebody's coming. I'll bet it's 'Swamp.' "

It was, and he reported the exact carrying out of the plan. Two men, young fellows, one very dark-skinned, the other light, and both carrying

guns, had started to the Point to wait for him. The other man,—there had been three along the wood road—had headed up into the nearer woods along the ocean side.

"You go back and wait for Dan," said Gus to Bill. "I'm going to make one more try for Tony."

CHAPTER XXIX

AT THE CRACK O' DAY

"TONY!"

There was no reply. Gus called again, more sharply, but still fearful of being heard. Silence. There could be no delay in action. With his nerves still a-tingle, the boy seized a stout bit of wood, evidently cut for the fireplace, inserted it between the window bars, bore down and with a low squeak of protest the nails came out. Another pry, with the sill for a fulcrum, and there was a hole big enough for a body to get through. The bit of wood now acted as a step and in a moment Gus was inside the cabin.

At the extreme end, lying against the logs, lay a figure. Gus instantly stooped to shake it. Tony waked up with a cry of alarm.

"Don't, don't yell, Tony, it's Gus! Get up and come quick!"

Nothing more was required of Tony. He was instantly awake and in action. Not another word passed between the boys—but was that cry heard by the kidnapers?—the rescuer wondered—and with reason. They must be off instantly.

To the window! As Tony drew near it, pulling Gus by the hand across the dark room, he paused. Outside there was the faint sound of a step. Tony uttered a faint "sh," and grabbed Gus by the arm. It was the elder Malatesta.

"Ah! So? You make get-away. I fix that." The next instant the muzzle of a rifle was poked through the broken place—poked well through, and possibly this shrewd defier of law and order never made a greater mistake, which he recognized when he felt the muzzle seized and bent aside.

He pulled the trigger, but the bullet buried itself harmlessly in the wall of the cabin. Malatesta

attempted to jerk the gun away, but Gus, fortified by the leverage against the sill and the window bars, held on, his own weapon crashing to the floor. How Tony managed to dive through that hole as he did, landing squarely on his enemy neither he nor Gus ever could figure out, but when Gus found the weapon free in his hands, picked up his own gun and followed Tony he found the insensible miscreant, who had received a sufficient smash in the jaw from Tony's heel.

"We must fly, my dear friend Gus," said Tony, "for now they will come—those other two!"

"We will stay right here and give them a pleasant reception," said Gus. "I will watch on the path, Tony. You take this gun. But first get a rope, quick! Tie that chap's arms behind him and search him for automatics, or anything."

It was but the work of a few minutes. Malatesta seemed to hesitate about coming to his senses. This was a good thing for the success of the subsequent capture; for the elder brother

might have called out and warned his two confederates.

Gus told Tony to guard the far side of the cabin and arranged that either must come at the call of the other. They must shoot only when sure.

Back came the younger Malatesta, their better known enemy. From behind a bush Gus poked his shot-gun muzzle into the fellow's ribs, told him to drop his rifle and stick up his hands. As he did this, he uttered a frantic yell of warning. Then he, too, was seized and bound.

They waited long and eagerly for the American accomplice. Would he sneak through the woods and try to surprise them? To guard against this, Gus left Tony with the two prisoners, thus reversing the conditions under which he had lately been held. There was no glee, no revengeful spirit shown by the fine-minded Italian youth, but a keen sense of satisfaction and determination glowed in his eyes.

Gus scoured the woods, hoping to find the ac-

complice, who would not recognize him as an enemy. But the fellow was gone. It was an easy thing for him to hide there—but not so easy to get away altogether, past the cordon of police now swarming over the peninsula. But he did get away, for he was never heard of again.

CHAPTER XXX

MORE MESSAGES

Oysterman Dan's little cottage became the scene of more than a reunion of old friends and of glad father and son. The news reporters also came, and, somewhat to his disgust, old Dan had to submit to his "pixture bein' took," along with the banker, Bill, Gus, Tony, and some of the insistent police and detectives who are often too eager for notoriety.

The Malatesta brothers, too, were not forgotten. Before they were taken off to a well deserved imprisonment, they were pictured and thus indelibly branded. Later they were returned to their native country.

All this business having been accomplished and Oysterman Dan rewarded utterly beyond his imagination, Mr. Sabaste took command with a

lavish hand, and the return of the four principals, by yacht and motor car, became a gala affair. Bill and Gus refused beyond parley to accept the reward Mr. Sabaste had offered. What the boys had done was in friendship only. Expenses? The banker had the say as to that.

Tony, in spite of his long imprisonment, was speedily restored to his happy, kindly state of mind. A long, roundabout trip took them all back to the Marshallton Tech where the late unfortunate could again outfit himself from an ample wardrobe, while Bill and Gus restored, with the janitor's knowledge, the radio transmitting set and the portable receiver. A new receiving set was to be completed soon and set up for Oysterman Dan.

The Farrells were visited; Tony went to the room he had occupied, but he could not remember a thing that had occurred there in connection with his mysterious disappearance. The farmer's wife and daughter set them all down to a good,

old-fashioned American dinner that the Sabastes laughingly declared did not need spaghetti to make it perfect.

Then, at the school again, the banker requested the use once more of the radio transmitter. Bill sat, listening in. Gus and Tony stood in the doorway, talking of school days.

"This is Angelo Sabaste speaking. I wish especially to convey a message to my old friend Guglielmo Marconi, on his yacht, the *Elettra.*"

Then followed many words in Italian, interspersed only here and there with an American proper name.

At the end of the message there was the usual pause. The banker took up the phones, Gus and Tony rushed to others. Presently they heard, in quiet, even tones, the hoped-for reply in English, as Mr. Sabaste had requested it should be:

"Senatore Marconi sends congratulations to Signor Sabaste that his son is restored to him and that two criminals, though they are our

countrymen, are to be sent from America, where too many such have come and belittled the name of Italy. But men like Signor Sabaste will lift that estimate.

"Senatore Marconi suggests, at your request, that the finest reward that could come to these young Americans who have shown such loyalty to your son, with such ingenuity and mechanical ability, is that they be encouraged to complete their technical education and then, with your son, to use their talents in a commercial way. Again congratulations for your son and those young Americans and—the best of success!"

How Mr. Sabaste, eager to carry out this suggestion from the famous inventor of wireless communication, joined with the boys' old friend Mr. Hooper in the establishment of a company in mechanical and electrical engineering, under the name of The Loyalty Company, will be told in "Bill Brown, Radio Wizard."

THE END

BILL BROWN LISTENS IN

WHIPPLE AND AARON

HURST